

Robert AW, Schittini AV, Marchini FK, Batista M, Affonso Da Costa MB, Senegaglia AC, Brofman PRS, Abud APR, Stimamiglio MA: Tissue-derived signals for mesenchymal stem cell stimulation: Role of cardiac and umbilical cord microenvironments.
Cells Tissues Organs

Supplemental Table 2. Results of gene ontology analyses by gProfiler tool. BP, biological process; CC, cellular component; MF, molecular function; hp, human phenotype ontology; ke, KEGG pathway; mi, miRBase microRNAs; re, REACTOME pathway; co, CORUM protein complexes; tf, TRANSFAC regulatory motif.

≡	p-value	T	Q	Q&T	Q&T/Q	Q&T/T	term ID	t type
uECM	4,17E-04	16	63	4	0,063	0,25 GO:0001580	BP	32 detection of chemical stimulus involved in sensory perception of bitter taste
	4,61E-07	367	63	13	0,206	0,035 GO:0010035	BP	26 response to inorganic substance
	1,07E-13	39	63	10	0,159	0,256 GO:0030049	BP	44 muscle filament sliding
	2,07E-04	113	63	7	0,111	0,062 GO:0030216	BP	27 keratinocyte differentiation
	4,17E-04	16	63	4	0,063	0,25 GO:0045109	BP	31 intermediate filament organization
	1,14E-03	48	63	5	0,079	0,104 GO:0030239	BP	35 myofibril assembly
	1,21E-02	1022	63	14	0,222	0,014 GO:0007155	BP	39 cell adhesion
	5,26E-03	29	63	4	0,063	0,138 GO:0018149	BP	64 peptide cross-linking
	6,25E-08	62	63	8	0,127	0,129 GO:0001895	BP	45 retina homeostasis
	2,23E-02	87	63	5	0,079	0,057 GO:0002576	BP	62 platelet degranulation
	5,05E-09	320	63	14	0,222	0,044 GO:0043588	BP	54 skin development
	1,65E-04	33	63	5	0,079	0,152 GO:0045104	BP	14 intermediate filament cytoskeleton organization
	9,39E-03	2962	63	25	0,397	0,008 GO:0065008	BP	13 regulation of biological quality
	2,05E-02	13	63	3	0,048	0,231 GO:0031581	BP	6 hemidesmosome assembly
	3,98E-02	16	63	3	0,048	0,188 GO:0055003	BP	36 cardiac myofibril assembly
	1,14E-02	35	63	4	0,063	0,114 GO:0043462	BP	8 regulation of ATPase activity
	1,05E-02	1478	63	17	0,27	0,012 GO:0044712	BP	38 single-organism catabolic process
	1,35E-02	1853	63	19	0,302	0,01 GO:0022607	BP	4 cellular component assembly
	1,14E-02	133	63	6	0,095	0,045 GO:0044420	CC	18 extracellular matrix part
	3,94E-20	1636	63	37	0,587	0,023 GO:0070062	CC	16 extracellular vesicular exosome
	1,06E-03	211	63	8	0,127	0,038 GO:0070161	CC	20 anchoring junction
	4,44E-08	239	63	12	0,19	0,05 GO:0045111	CC	15 intermediate filament cytoskeleton
	1,29E-03	2664	63	25	0,397	0,009 GO:0005829	CC	30 cytosol
	8,89E-08	194	63	11	0,175	0,057 GO:0005882	CC	23 intermediate filament
	7,52E-06	374	63	12	0,19	0,032 GO:0003779	MF	33 actin binding
	1,46E-11	621	63	20	0,317	0,032 GO:0005198	MF	7 structural molecule activity
	2,46E-03	4	60	3	0,05	0,75 HP:0003704	hp	63 Scapuloperoneal weakness
	4,33E-02	23	60	4	0,067	0,174 HP:0003691	hp	21 Scapular winging
	4,18E-02	847	60	19	0,317	0,022 HP:0002715	hp	57 Abnormality of the immune system
	5,00E-02	9	60	3	0,05	0,333 HP:0006466	hp	61 Ankle contracture
	1,76E-03	11	60	4	0,067	0,364 HP:0001805	hp	48 Thick nail
	4,21E-03	49	60	6	0,1	0,122 HP:0011006	hp	50 Abnormality of the musculature of the neck
	6,11E-03	5	60	3	0,05	0,6 HP:0005180	hp	41 Tricuspid regurgitation
	5,57E-03	111	60	8	0,133	0,072 HP:0008065	hp	12 Aplasia/Hypoplasia of the skin
	1,66E-08	24	60	8	0,133	0,333 HP:0000972	hp	52 Palmoplantar hyperkeratosis
	1,95E-02	19	60	4	0,067	0,211 HP:0001430	hp	56 Abnormality of the calf musculature
	3,59E-05	1146	60	26	0,433	0,023 HP:0000006	hp	19 Autosomal dominant inheritance
	1,25E-16	189	60	21	0,35	0,111 HP:0000962	hp	17 Hyperkeratosis

uECM	1,58E-08	52	60	10	0,167	0,192	HP:0100578	hp	1	Lipoatrophy
	8,46E-03	199	60	10	0,167	0,05	HP:0001639	hp	25	Hypertrophic cardiomyopathy
	4,33E-02	23	60	4	0,067	0,174	HP:0003700	hp	59	Generalized amyotrophy
	1,03E-03	89	60	8	0,133	0,09	HP:0000975	hp	49	Hyperhidrosis
	2,52E-03	45	60	6	0,1	0,133	HP:0008404	hp	53	Nail dystrophy
	1,21E-02	6	60	3	0,05	0,5	HP:0002616	hp	22	Aortic root dilatation
	9,83E-04	61	60	7	0,117	0,115	HP:0001644	hp	42	Dilated cardiomyopathy
	1,21E-02	17	60	4	0,067	0,235	HP:0008180	hp	46	Mildly elevated creatine phosphokinase
	9,63E-05	123	60	10	0,167	0,081	HP:0003457	hp	9	EMG abnormality
	1,19E-02	88	60	7	0,117	0,08	HP:0003701	hp	51	Proximal muscle weakness
	2,32E-04	102	60	9	0,15	0,088	HP:0001635	hp	47	Congestive heart failure
	2,13E-02	133	60	8	0,133	0,06	HP:0001874	hp	34	Abnormality of neutrophils
	1,13E-03	10	60	4	0,067	0,4	HP:0003803	hp	37	Type 1 muscle fiber predominance
	8,12E-07	130	60	12	0,2	0,092	HP:0003198	hp	43	Myopathy
	5,53E-04	151	62	7	0,113	0,046	KEGG:04261	ke	10	Adrenergic signaling in cardiomyocytes
	3,81E-07	83	62	8	0,129	0,096	KEGG:05410	ke	29	Hypertrophic cardiomyopathy (HCM)
	7,30E-07	90	62	8	0,129	0,089	KEGG:05414	ke	28	Dilated cardiomyopathy
	6,20E-06	78	62	7	0,113	0,09	KEGG:04260	ke	24	Cardiac muscle contraction
	4,39E-03	208	62	7	0,113	0,034	KEGG:04510	ke	5	Focal adhesion
	5,82E-04	717	63	12	0,19	0,017	MI:hsa-miR-768-5p	mi	65	MI:hsa-miR-768-5p
cCM	2,92E-09	33	60	9	0,15	0,273	REAC:397014	re	2	Muscle contraction
	4,10E-02	25	60	4	0,067	0,16	REAC:382054	re	3	PDGF binds to extracellular matrix proteins
	p-value	T	Q	Q&T	Q&T/Q	Q&T/T		term ID	t	name and depth in group
	1,23E-02	265	443	20	0,045	0,075	GO:0051186	BP	44	cofactor metabolic process
	3,21E-02	3	443	3	0,007	1	GO:0035995	BP	92	detection of muscle stretch
	1,02E-07	105	443	18	0,041	0,171	GO:0002474	BP	87	antigen processing and presentation of peptide antigen via MHC class I
	2,78E-05	72	443	13	0,029	0,181	GO:1902400	BP	29	intracellular signal transduction involved in G1 DNA damage checkpoint
	1,59E-02	293	443	21	0,047	0,072	GO:0052548	BP	58	regulation of endopeptidase activity
	2,24E-05	113	443	16	0,036	0,142	GO:0006414	BP	41	translational elongation
	8,00E-13	48	443	17	0,038	0,354	GO:0030239	BP	60	myofibril assembly
	1,48E-07	765	443	50	0,113	0,065	GO:0044403	BP	56	symbiosis, encompassing mutualism through parasitism
	4,13E-05	4160	443	148	0,334	0,036	GO:0019538	BP	86	protein metabolic process
	2,78E-07	654	443	45	0,102	0,069	GO:0016071	BP	76	mRNA metabolic process
	1,02E-04	54	443	11	0,025	0,204	GO:0046496	BP	67	nicotinamide nucleotide metabolic process
	3,80E-02	24	443	6	0,014	0,25	GO:0010880	BP	70	regulation of release of sequestered calcium ion into cytosol by sarcoplasmic reticulum
	7,71E-05	123	443	16	0,036	0,13	GO:0002526	BP	68	acute inflammatory response
	4,60E-03	37	443	8	0,018	0,216	GO:0030834	BP	17	regulation of actin filament depolymerization
	1,26E-24	39	443	23	0,052	0,59	GO:0030049	BP	112	muscle filament sliding
	2,05E-04	35	443	9	0,02	0,257	GO:0043462	BP	24	regulation of ATPase activity
	2,78E-05	72	443	13	0,029	0,181	GO:0051436	BP	104	negative regulation of ubiquitin-protein ligase activity involved in mitotic cell cycle
	6,86E-06	77	443	14	0,032	0,182	GO:0051437	BP	13	positive regulation of ubiquitin-protein ligase activity involved in mitotic cell cycle
	4,03E-06	62	443	13	0,029	0,21	GO:0006521	BP	105	regulation of cellular amino acid metabolic process
	2,78E-05	72	443	13	0,029	0,181	GO:0006977	BP	96	DNA damage response, signal transduction by p53 class mediator resulting in cell cycle arrest
	1,12E-02	219	443	18	0,041	0,082	GO:0006457	BP	6	protein folding
	4,15E-05	88	443	14	0,032	0,159	GO:0031145	BP	111	anaphase-promoting complex-dependent proteasomal ubiquitin-dependent protein catabolic process
	1,86E-02	184	443	16	0,036	0,087	GO:0000209	BP	9	protein polyubiquitination
	7,24E-03	28	443	7	0,016	0,25	GO:0030449	BP	34	regulation of complement activation

1,05E-08	438	443	38	0,086	0,087 GO:0006091	BP	37 generation of precursor metabolites and energy
2,58E-02	46	443	8	0,018	0,174 GO:0006958	BP	5 complement activation, classical pathway
1,84E-11	48	443	16	0,036	0,333 GO:0031093	CC	16 platelet alpha granule lumen
7,05E-05	211	443	21	0,047	0,1 GO:0070161	CC	31 anchoring junction
2,28E-74	1636	443	181	0,409	0,111 GO:0065010	CC	77 extracellular membrane-bounded organelle
2,54E-05	99	443	15	0,034	0,152 GO:0042383	CC	69 sarcolemma
2,14E-05	47	443	11	0,025	0,234 GO:0044291	CC	53 cell-cell contact zone
8,27E-03	134	443	14	0,032	0,104 GO:0030055	CC	79 cell-substrate junction
4,31E-02	15	443	5	0,011	0,333 GO:0031143	CC	51 pseudopodium
3,53E-28	621	443	74	0,167	0,119 GO:0005198	MF	90 structural molecule activity
1,00E-10	1170	443	72	0,163	0,062 GO:0044822	MF	66 poly(A) RNA binding
1,65E-04	25	443	8	0,018	0,32 GO:0070003	MF	30 threonine-type peptidase activity
4,12E-05	688	443	42	0,095	0,061 GO:0005509	MF	40 calcium ion binding
6,21E-05	15	438	8	0,018	0,533 CORUM:194	co	32 PA28gamma-20S proteasome
3,02E-05	14	438	8	0,018	0,571 CORUM:191	co	71 20S proteasome
2,29E-03	22	438	8	0,018	0,364 CORUM:181	co	109 26S proteasome
3,39E-02	6	438	4	0,009	0,667 CORUM:2837	co	103 Profilin 1 complex
2,38E-06	36	438	13	0,03	0,361 CORUM:193	co	11 PA700-20S-PA28 complex
1,77E-07	16	438	10	0,023	0,625 CORUM:192	co	85 PA28-20S proteasome
6,16E-03	133	442	19	0,043	0,143 HP:0001874	hp	63 Abnormality of neutrophils
3,37E-02	10	442	5	0,011	0,5 HP:0100303	hp	21 Muscle fiber cytoplasmatic inclusion bodies
1,57E-02	250	442	27	0,061	0,108 HP:0001315	hp	55 Reduced tendon reflexes
2,97E-02	99	442	15	0,034	0,152 HP:0003677	hp	84 Slow progression
6,06E-10	61	442	20	0,045	0,328 HP:0001644	hp	57 Dilated cardiomyopathy
3,06E-04	44	442	12	0,027	0,273 HP:0001437	hp	10 Abnormality of the musculature of the lower limbs
5,02E-05	25	442	10	0,023	0,4 HP:0000467	hp	64 Neck muscle weakness
1,75E-11	52	442	20	0,045	0,385 HP:0100578	hp	97 Lipoatrophy
4,23E-06	146	442	25	0,057	0,171 HP:0010876	hp	62 Abnormality of circulating protein level
4,92E-05	7	442	6	0,014	0,857 HP:0009025	hp	2 Increased connective tissue
9,59E-09	121	442	26	0,059	0,215 HP:0000982	hp	14 Palmoplantar keratoderma
3,78E-13	130	442	32	0,072	0,246 HP:0003198	hp	49 Myopathy
4,26E-02	23	442	7	0,016	0,304 HP:0003691	hp	3 Scapular winging
1,43E-08	123	442	26	0,059	0,211 HP:0003457	hp	47 EMG abnormality
6,08E-04	225	442	28	0,063	0,124 HP:0011675	hp	38 Arrhythmia
1,47E-05	78	442	15	0,034	0,192 KEGG:04260	ke	102 Cardiac muscle contraction
1,06E-03	135	442	17	0,038	0,126 KEGG:04530	ke	74 Tight junction
3,58E-09	106	442	22	0,05	0,208 KEGG:01200	ke	95 Carbon metabolism
3,25E-07	69	442	16	0,036	0,232 KEGG:04610	ke	108 Complement and coagulation cascades
3,15E-03	18	442	6	0,014	0,333 KEGG:01210	ke	35 2-Oxocarboxylic acid metabolism
8,89E-03	30	442	7	0,016	0,233 KEGG:00020	ke	50 Citrate cycle (TCA cycle)
1,78E-05	90	442	16	0,036	0,178 KEGG:05414	ke	52 Dilated cardiomyopathy
3,26E-04	151	442	19	0,043	0,126 KEGG:04261	ke	54 Adrenergic signaling in cardiomyocytes
4,75E-05	74	442	14	0,032	0,189 KEGG:01230	ke	83 Biosynthesis of amino acids
3,88E-02	74	442	10	0,023	0,135 KEGG:05412	ke	46 Arrhythmogenic right ventricular cardiomyopathy (ARVC)
7,92E-07	83	442	17	0,038	0,205 KEGG:05410	ke	23 Hypertrophic cardiomyopathy (HCM)
1,35E-06	208	442	27	0,061	0,13 KEGG:04510	ke	8 Focal adhesion
1,31E-06	48	442	13	0,029	0,271 KEGG:03050	ke	4 Proteasome

cCM	4,73E-02	468	443	24	0,054	0,051	MI:hsa-miR-593*	mi	72	MI:hsa-miR-593*
	3,32E-02	637	443	30	0,068	0,047	MI:hsa-miR-219-1-3p	mi	27	MI:hsa-miR-219-1-3p
	1,76E-02	676	443	32	0,072	0,047	MI:mmu-miR-700	mi	65	MI:mmu-miR-700
	2,64E-02	422	443	23	0,052	0,055	MI:hsa-miR-149*	mi	12	MI:hsa-miR-149*
	7,05E-03	798	443	37	0,084	0,046	MI:hsa-miR-509-3p	mi	1	MI:hsa-miR-509-3p
	1,15E-03	48	443	13	0,029	0,271	REAC:212919	re	33	Regulation of activated PAK-2p34 by proteasome mediated degradation
	4,97E-02	15	443	6	0,014	0,4	REAC:354087	re	7	Recruitment of Grb2 to pFADK1
	3,15E-02	14	443	6	0,014	0,429	REAC:377643	re	80	Dephosphorylation of inactive c-src by PTPB1
	6,80E-03	16	443	7	0,016	0,438	REAC:372708	re	26	p130Cas linkage to MAPK signaling for integrins
	3,15E-02	14	443	6	0,014	0,429	REAC:354149	re	99	Interaction of alpha11beta3 with Fibrinogen
	4,33E-03	4	443	4	0,009	1	REAC:140851	re	18	fibrin multimer -> fibrin multimer, crosslinked + NH4+
	3,15E-02	14	443	6	0,014	0,429	REAC:354073	re	61	Auto-phosphorylation of FADK1 at Y397
	1,15E-03	48	443	13	0,029	0,271	REAC:211715	re	20	Proteasome mediated degradation of PAK-2p34
	8,87E-04	47	443	13	0,029	0,277	REAC:68948	re	89	Ubiquitinated Orc1 is degraded by the proteasome
	3,82E-02	65	443	13	0,029	0,2	REAC:174255	re	113	Degradation multiubiquitinated Cyclin A
	2,35E-14	33	443	20	0,045	0,606	REAC:390593	re	91	ATP Hydrolysis By Myosin
	3,26E-02	91	443	16	0,036	0,176	REAC:156842	re	107	Eukaryotic Translation Elongation
	1,05E-04	60	443	16	0,036	0,267	REAC:114611	re	48	Exocytosis of Alpha granule
	3,15E-02	14	443	6	0,014	0,429	REAC:354124	re	93	Phosphorylation of pFADK1 by SRC
	1,36E-03	56	443	14	0,032	0,25	REAC:195721	re	106	Signaling by Wnt
	6,67E-04	53	443	14	0,032	0,264	REAC:174113	re	15	SCF-beta-TrCP mediated degradation of Emi1
	2,28E-02	62	443	13	0,029	0,21	REAC:188191	re	81	APC/C:Cdh1-mediated degradation of Skp2
	1,48E-03	49	443	13	0,029	0,265	REAC:353125	re	101	26S proteasome degrades ODC holoenzyme complex
	3,04E-03	52	443	13	0,029	0,25	REAC:180585	re	73	Vif-mediated degradation of APOBEC3G
	3,15E-02	14	443	6	0,014	0,429	REAC:377641	re	45	alpha11beta3:c-Src clustering
	3,07E-04	50	443	14	0,032	0,28	REAC:180573	re	19	Degradation of ubiquitinated CD4
	3,15E-02	14	443	6	0,014	0,429	REAC:377640	re	88	Autophosphorylation of c-src
	1,15E-03	48	443	13	0,029	0,271	REAC:75825	re	100	Proteasome mediated degradation of Cyclin D1
	8,52E-04	54	443	14	0,032	0,259	REAC:187574	re	110	Degradation of ubiquitinated p27/p21 by the 26S proteasome
	2,72E-02	63	443	13	0,029	0,206	REAC:174202	re	82	Degradation of multiubiquitinated Securin
	1,15E-03	48	443	13	0,029	0,271	REAC:68825	re	75	Ubiquitinated geminin is degraded by the proteasome
	2,28E-02	62	443	13	0,029	0,21	REAC:174084	re	22	Autodegradation of Cdh1 by Cdh1:APC/C
	3,15E-02	14	443	6	0,014	0,429	REAC:354066	re	42	Translocation of FADK1 to Focal complexes
	1,15E-03	48	443	13	0,029	0,271	REAC:69613	re	94	p53-Independent G1/S DNA damage checkpoint
	3,15E-02	14	443	6	0,014	0,429	REAC:377644	re	98	Release of Csk from Src
uCM	p-value	T	Q	Q&T	Q&T/Q	Q&T/T		term ID	t type	
	8,16E-05	209	291	17	0,058	0,081	GO:0006006	BP	33	glucose metabolic process
	4,17E-04	72	291	10	0,034	0,139	GO:1902400	BP	90	intracellular signal transduction involved in G1 DNA damage checkpoint
	6,31E-12	2475	291	90	0,309	0,036	GO:0009056	BP	21	catabolic process
	1,65E-02	64	291	8	0,027	0,125	GO:0006096	BP	102	glycolytic process
	9,60E-05	62	291	10	0,034	0,161	GO:0006521	BP	26	regulation of cellular amino acid metabolic process
	4,17E-04	72	291	10	0,034	0,139	GO:0051436	BP	74	negative regulation of ubiquitin-protein ligase activity involved in mitotic cell cycle
	7,56E-19	87	291	23	0,079	0,264	GO:0002576	BP	61	platelet degranulation
	4,48E-19	12323	291	263	0,904	0,021	GO:0044699	BP	92	single-organism process
	9,20E-07	29	291	9	0,031	0,31	GO:0018149	BP	103	peptide cross-linking
	3,99E-08	64	291	13	0,045	0,203	GO:0006956	BP	89	complement activation
	4,17E-04	72	291	10	0,034	0,139	GO:0006977	BP	58	DNA damage response, signal transduction by p53 class mediator resulting in cell cycle arrest

1,96E-03	128	291	12	0,041	0,094	GO:0055002	BP	52 striated muscle cell development
4,73E-07	899	291	42	0,144	0,047	GO:0007010	BP	56 cytoskeleton organization
9,27E-09	85	291	15	0,052	0,176	GO:0072376	BP	83 protein activation cascade
6,83E-04	188	291	15	0,052	0,08	GO:0016051	BP	75 carbohydrate biosynthetic process
2,26E-07	46	291	11	0,038	0,239	GO:0006958	BP	69 complement activation, classical pathway
1,04E-03	45	291	8	0,027	0,178	GO:0003229	BP	22 ventricular cardiac muscle tissue development
2,82E-03	88	291	10	0,034	0,114	GO:0031145	BP	96 anaphase-promoting complex-dependent proteasomal ubiquitin-dependent protein catabolic process
4,94E-02	54	291	7	0,024	0,13	GO:0046496	BP	51 nicotinamide nucleotide metabolic process
3,23E-04	286	291	19	0,065	0,066	GO:0044262	BP	47 cellular carbohydrate metabolic process
2,28E-06	211	291	19	0,065	0,09	GO:0070161	CC	80 anchoring junction
1,20E-04	8	291	5	0,017	0,625	GO:0005577	CC	72 fibrinogen complex
3,00E-72	1636	291	145	0,498	0,089	GO:0065010	CC	16 extracellular membrane-bounded organelle
1,04E-02	43	291	7	0,024	0,163	GO:0014704	CC	84 intercalated disc
6,32E-05	94	291	12	0,041	0,128	GO:0005581	CC	20 collagen
4,17E-04	181	291	15	0,052	0,083	GO:0005788	CC	87 endoplasmic reticulum lumen
1,14E-04	99	291	12	0,041	0,121	GO:0042383	CC	64 sarcolemma
4,54E-04	134	291	13	0,045	0,097	GO:0030055	CC	60 cell-substrate junction
2,53E-17	362	291	38	0,131	0,105	GO:0031012	CC	101 extracellular matrix
4,69E-95	2749	291	200	0,687	0,073	GO:0044421	CC	54 extracellular region part
4,70E-25	208	291	37	0,127	0,178	GO:0043292	CC	79 contractile fiber
2,03E-22	82	291	25	0,086	0,305	GO:0031983	CC	42 vesicle lumen
1,97E-04	25	291	7	0,024	0,28	GO:0070003	MF	71 threonine-type peptidase activity
1,96E-03	152	291	13	0,045	0,086	GO:0016853	MF	27 isomerase activity
1,64E-02	629	291	26	0,089	0,041	GO:0008233	MF	91 peptidase activity
4,39E-02	11	291	4	0,014	0,364	GO:0016868	MF	50 intramolecular transferase activity, phosphotransferases
3,14E-08	688	291	38	0,131	0,055	GO:0005509	MF	76 calcium ion binding
1,56E-02	183	291	13	0,045	0,071	GO:0005539	MF	17 glycosaminoglycan binding
1,97E-04	25	291	7	0,024	0,28	GO:0004298	MF	4 threonine-type endopeptidase activity
1,65E-18	621	291	50	0,172	0,081	GO:0005198	MF	5 structural molecule activity
1,18E-06	14	285	7	0,025	0,5	CORUM:191	co	32 20S proteasome
2,17E-06	15	285	7	0,025	0,467	CORUM:194	co	2 PA28gamma-20S proteasome
2,07E-06	22	285	8	0,028	0,364	CORUM:181	co	100 26S proteasome
5,79E-07	36	285	10	0,035	0,278	CORUM:193	co	24 PA700-20S-PA28 complex
1,79E-09	16	285	9	0,032	0,562	CORUM:192	co	98 PA28-20S proteasome
2,87E-03	19	286	7	0,024	0,368	HP:0001430	hp	63 Abnormality of the calf musculature
1,83E-03	33	286	9	0,031	0,273	HP:0001724	hp	44 Aortic dilatation
3,42E-04	123	286	18	0,063	0,146	HP:0003457	hp	93 EMG abnormality
1,63E-08	52	286	16	0,056	0,308	HP:0100578	hp	97 Lipoatrophy
2,41E-07	61	286	16	0,056	0,262	HP:0001644	hp	41 Dilated cardiomyopathy
8,37E-03	49	286	10	0,035	0,204	HP:0011006	hp	15 Abnormality of the musculature of the neck
1,53E-02	88	286	13	0,045	0,148	HP:0003701	hp	82 Proximal muscle weakness
1,15E-08	189	286	29	0,101	0,153	HP:0000962	hp	28 Hyperkeratosis
1,02E-03	146	286	19	0,066	0,13	HP:0010876	hp	23 Abnormality of circulating protein level
1,19E-07	130	286	23	0,08	0,177	HP:0003198	hp	6 Myopathy
1,81E-03	4	286	4	0,014	1	HP:0003704	hp	34 Scapuloperoneal weakness
1,67E-03	78	286	10	0,035	0,128	KEGG:04260	ke	7 Cardiac muscle contraction
1,57E-13	69	286	19	0,066	0,275	KEGG:04610	ke	31 Complement and coagulation cascades

uCM	8,45E-06	83	286	13	0,045	0,157	KEGG:05410	ke	11 Hypertrophic cardiomyopathy (HCM)
	6,66E-03	74	286	9	0,031	0,122	KEGG:01230	ke	77 Biosynthesis of amino acids
	1,65E-05	48	286	10	0,035	0,208	KEGG:03050	ke	81 Proteasome
	1,71E-02	66	286	8	0,028	0,121	KEGG:00010	ke	86 Glycolysis / Gluconeogenesis
	1,50E-05	87	286	13	0,045	0,149	KEGG:04512	ke	62 ECM-receptor interaction
	1,54E-04	106	286	13	0,045	0,123	KEGG:01200	ke	88 Carbon metabolism
	6,66E-03	74	286	9	0,031	0,122	KEGG:05412	ke	59 Arrhythmogenic right ventricular cardiomyopathy (ARVC)
	5,31E-05	54	286	10	0,035	0,185	KEGG:05150	ke	49 Staphylococcus aureus infection
	2,26E-05	90	286	13	0,045	0,144	KEGG:05414	ke	13 Dilated cardiomyopathy
	6,22E-03	109	286	11	0,038	0,101	KEGG:05146	ke	85 Amoebiasis
	1,81E-08	208	286	24	0,084	0,115	KEGG:04510	ke	94 Focal adhesion
	4,23E-03	28	286	6	0,021	0,214	KEGG:00030	ke	43 Pentose phosphate pathway
	4,32E-02	745	291	25	0,086	0,034	MI:hsa-miR-886-5p	mi	40 MI:hsa-miR-886-5p
	2,36E-02	717	291	25	0,086	0,035	MI:hsa-miR-768-5p	mi	8 MI:hsa-miR-768-5p
	2,00E-02	798	291	27	0,093	0,034	MI:hsa-miR-509-3p	mi	38 MI:hsa-miR-509-3p
	4,03E-03	48	286	10	0,035	0,208	REAC:68825	re	18 Ubiquitinated geminin is degraded by the proteasome
	2,17E-03	128	286	17	0,059	0,133	REAC:109581	re	55 Apoptosis
	3,71E-03	58	286	11	0,038	0,19	REAC:70693	re	95 Ornithine metabolism
	2,34E-02	3	286	3	0,01	1	REAC:140842	re	57 n fibrin monomers -> fibrin multimer
	3,87E-04	16	286	7	0,024	0,438	REAC:372708	re	10 p130Cas linkage to MAPK signaling for integrins
	8,55E-03	52	286	10	0,035	0,192	REAC:180585	re	35 Vif-mediated degradation of APOBEC3G
	4,18E-02	62	286	10	0,035	0,161	REAC:174084	re	48 Autodegradation of Cdh1 by Cdh1:APC/C
	2,18E-04	97	286	16	0,056	0,165	REAC:71387	re	65 Metabolism of carbohydrates
	2,81E-08	33	286	13	0,045	0,394	REAC:397014	re	29 Muscle contraction
	1,02E-02	53	286	10	0,035	0,189	REAC:174113	re	12 SCF-beta-TrCP mediated degradation of Emi1
	3,30E-03	47	286	10	0,035	0,213	REAC:68948	re	73 Ubiquitinated Orc1 is degraded by the proteasome
	4,03E-03	48	286	10	0,035	0,208	REAC:212919	re	45 Regulation of activated PAK-2p34 by proteasome mediated degradation
	1,21E-02	54	286	10	0,035	0,185	REAC:187574	re	67 Degradation of ubiquitinated p27/p21 by the 26S proteasome
	5,93E-03	50	286	10	0,035	0,2	REAC:180573	re	70 Degradation of ubiquitinated CD4
	4,03E-03	48	286	10	0,035	0,208	REAC:75825	re	1 Proteasome mediated degradation of Cyclin D1
	1,69E-02	56	286	10	0,035	0,179	REAC:195721	re	30 Signaling by Wnt
	4,81E-02	63	286	10	0,035	0,159	REAC:174202	re	25 Degradation of multiubiquitinated Securin
	4,18E-02	62	286	10	0,035	0,161	REAC:188191	re	14 APC/C:Cdh1-mediated degradation of Skp2
	4,03E-03	48	286	10	0,035	0,208	REAC:69613	re	46 p53-Independent G1/S DNA damage checkpoint
	7,87E-11	60	286	19	0,066	0,317	REAC:114611	re	3 Exocytosis of Alpha granule
	8,84E-04	4	286	4	0,014	1	REAC:140851	re	37 fibrin multimer -> fibrin multimer, crosslinked + NH4+
	3,92E-03	344	291	19	0,065	0,055	TF:M00806_1	tf	36 Factor: NF-1; motif: NTGGNNNNNGCCAANN; match class: 1
cECM	p-value	T	Q	Q&T	Q&T/Q	Q&T/T		term ID	t group
	2,30E-10	39	51	8	0,157	0,205	GO:0030049	BP	16 muscle filament sliding
	7,73E-03	2962	51	22	0,431	0,007	GO:0065008	BP	44 regulation of biological quality
	5,54E-03	35	51	4	0,078	0,114	GO:0043462	BP	27 regulation of ATPase activity
	1,06E-02	41	51	4	0,078	0,098	GO:0055010	BP	28 ventricular cardiac muscle tissue morphogenesis
	1,43E-02	168	51	6	0,118	0,036	GO:0060047	BP	20 heart contraction
	2,39E-02	16	51	3	0,059	0,188	GO:0001580	BP	10 detection of chemical stimulus involved in sensory perception of bitter taste
	2,00E-02	48	51	4	0,078	0,083	GO:0030239	BP	22 myofibril assembly
	7,68E-03	337	51	8	0,157	0,024	GO:0007517	BP	13 muscle organ development
	7,41E-07	62	51	7	0,137	0,113	GO:0001895	BP	41 retina homeostasis

cECM	3,22E-02	54	51	4	0,078	0,074	GO:0046496	BP	12	nicotinamide nucleotide metabolic process
	2,30E-10	39	51	8	0,157	0,205	GO:0033275	BP	15	actin-myosin filament sliding
	2,95E-03	128	51	6	0,118	0,047	GO:0055002	BP	5	striated muscle cell development
	1,24E-13	1636	51	28	0,549	0,017	GO:0070062	CC	2	extracellular vesicular exosome
	1,09E-04	367	51	10	0,196	0,027	GO:0015629	CC	1	actin cytoskeleton
	1,24E-03	2664	51	22	0,431	0,008	GO:0005829	CC	24	cytosol
	7,35E-09	191	51	11	0,216	0,058	GO:0044449	CC	39	contractile fiber part
	1,06E-02	41	51	4	0,078	0,098	GO:0008307	MF	18	structural constituent of muscle
	4,46E-03	688	51	11	0,216	0,016	GO:0005509	MF	4	calcium ion binding
	6,31E-07	374	51	12	0,235	0,032	GO:0003779	MF	37	actin binding
	2,78E-02	12	47	2	0,043	0,167	CORUM:725	co	36	P2X7 receptor signalling complex
	1,24E-02	123	47	7	0,149	0,057	HP:0003457	hp	21	EMG abnormality
	8,38E-07	52	47	8	0,17	0,154	HP:0100578	hp	7	Lipoatrophy
	1,51E-02	23	47	4	0,085	0,174	HP:0003691	hp	17	Scapular winging
	6,72E-03	19	47	4	0,085	0,211	HP:0001430	hp	30	Abnormality of the calf musculature
	3,28E-02	199	47	8	0,17	0,04	HP:0001639	hp	31	Hypertrophic cardiomyopathy
	4,87E-02	2	47	2	0,043	1	HP:0001704	hp	11	Tricuspid valve prolapse
	2,24E-02	189	47	8	0,17	0,042	HP:0000962	hp	46	Hyperkeratosis
	2,47E-03	61	47	6	0,128	0,098	HP:0001644	hp	29	Dilated cardiomyopathy
	4,16E-03	17	47	4	0,085	0,235	HP:0008180	hp	6	Mildly elevated creatine phosphokinase
	8,11E-05	130	47	9	0,191	0,069	HP:0003198	hp	34	Myopathy
	5,00E-02	102	47	6	0,128	0,059	HP:0001635	hp	43	Congestive heart failure
	1,26E-04	208	51	8	0,157	0,038	KEGG:04510	ke	33	Focal adhesion
	7,30E-05	83	51	6	0,118	0,072	KEGG:05410	ke	32	Hypertrophic cardiomyopathy (HCM)
	1,58E-02	74	51	4	0,078	0,054	KEGG:05412	ke	26	Arrhythmogenic right ventricular cardiomyopathy (ARVC)
	1,24E-03	135	51	6	0,118	0,044	KEGG:04530	ke	35	Tight junction
	1,11E-03	78	51	5	0,098	0,064	KEGG:04260	ke	42	Cardiac muscle contraction
	1,18E-04	90	51	6	0,118	0,067	KEGG:05414	ke	23	Dilated cardiomyopathy
	2,56E-02	151	51	5	0,098	0,033	KEGG:04261	ke	38	Adrenergic signaling in cardiomyocytes
	4,43E-02	626	50	8	0,16	0,013	MI:mmu-miR-695	mi	25	MI:mmu-miR-695
	5,00E-02	3	51	2	0,039	0,667	REAC:349794	re	14	Exocytosis of Alpha Actinins
	9,73E-09	33	51	8	0,157	0,242	REAC:390593	re	19	ATP Hydrolysis By Myosin
	6,75E-03	19	49	3	0,061	0,158	TF:M00403_2	tf	8	Factor: aMEF-2; motif: CKGDYTA AAAATAACYMM; match class: 2

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GO:0030049	P13533,Q6FH91,Q6ZN40,P12829,Q53SB5,P12883,Q6IB42,P35609,Q8WZ42,P68032
GO:0030216	P13645,Q04695,P01040,B2CIS9,P35908,Q08188,P15924
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HP:0006466	P13533,Q53SB5,P12883,P21333
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GO:1902400	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,K7ENY6,P49721,H3BQV2,G3V3U4,Q06323,C9J0E9,Q86SZ7
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GO:0019538	P02768,P07384,P13639,P02545,P02790,Q0QF37,K7ESE8,Q96P63,Q96K68,P12273,E9PKE3,P15924,P04040,O14818,F5H823,E9PAV3,O00391,O95393,O95831,P00488,F5H2D0,B4DPH4,E9KL23,P01023,P01031,Q5H9A7,E9PR44,P02741,P02760,Q5TZZ9,P04275,U3KPR7,Q5JYR7,E9KL26,Q7Z612,E9PHK0,P05543,P05546,E5RGW4,P07360,Q6FH10,Q68Y91,P08697,C9J9K3,P0C0L5,K7EPB2,P10909,P11532,H0YAG8,P13667,E9PNW4,Q5CAQ5,E7DVW4,H3BNG3,P19021,A6NLG9,P22061,E7EPZ9,F2Z2S8,G3V1A4,F8W0K0,F8WF65,P25398,P25786,H0YMZ1,Q53YD7,Q53XJ5,D6RHJ3,P28070,Q6IAT9,P28074,P29144,E9PN91,P30050,B3KQV6,B4E3A8,P36955,U3KQ84,I3L297,P46109,Q5T7N0,K7ENY6,H0YE66,P49721,B3KPA6,E7EU85,H3BQV2,K7ENJ0,G3V3U4,P61758,P61981,I3L3P7,M0QX76,B7Z7P8,Q96IR1,B3KQ51,P62906,E7ERH2,P68366,C9JFR7,B2ZZ89,D3DUJ0,F8VR69,Q06323,I3L3Q7,B1ANR0,A0M8W4,E7ER42,D3DVK8,A6NE76,O43209,F5H1S8,E7EQG2,C9J0E9,J3KRL2,Q15084,A6PVN8,Q3LIE7,Q15717,Q15746,Q16531,E7EX54,Q32MK0,H0YC73,Q6UVK1,Q8IWX7,Q8N335,Q8NDY3,Q9B526,Q9BXX5,A8K0P2,Q5T6H7,F5GXT8,Q9P035,F8WDB5,Q86SZ7,C9JLV5,B0QY90,H7C4G5,Q9Y490,C9J0K6,H7BZJ3,Q7Z3H5,R4GN93,Q8WZ42,K9JA46,P21333,B4DIT7
GO:0016071	E9PKE3,O14818,Q5STU3,H3BV41,H3BM67,Q7Z612,C9J9K3,H3BNG3,Q86TY5,F2Z2S8,F8W0K0,P25398,P25786,H0YMZ1,K7ENG2,A6NLN1,P28070,Q6IAT9,P28074,P30050,B3KQV6,Q5T7N0,K7ENY6,P49721,H3BQV2,G3V3U4,I3L3P7,M0QX76,I3QLI9,B7Z7P8,Q96IR1,B3KQ51,P62906,D0PNI1,F8VR69,Q06323,I3L3Q7,D6RF44,E7EQG2,C9J0E9,C9IZL7,Q15717,E7EX54,Q86SZ7,Q9Y235
GO:0046496	J3KS22,Q5U077,Q0QF37,C9J4N6,Q9P1G4,Q6FHU2,F2Z393,Q02218,C9J8U2,Q8N335,B4E022
GO:0010880	O14958,P11532,M0QZ43,A8HT81,P32418,C9J0K6
GO:0002526	P00738,E9KL23,P01023,P01031,P02741,P02765,Q5TZZ9,E9KL26,P07360,P08697,P0C0L5,E9PNW4,P19652,G8JLH9,I3L3Q7,Q32MK0
GO:0030834	Q13813,P02549,G3V1A4,P47756,F6RFD5,B2ZZ89,Q6IBS0,Q549N0
GO:0030049	P13533,Q6FH91,Q6ZN40,P12829,Q53SB5,P12883,Q6IB42,A2TDC0,P06753,P11532,P13535,G3V3L5,K7EN02,P28289,Q7Z554,G3V1Y7,P68133,Q9Y623,K7EQW8,Q5TCU3,P35609,Q8WZ42,P68032
GO:0043462	K7EJ44,P13533,Q6FH91,Q6ZN40,P12829,G3V438,K7EN02,Q7Z554,Q5TCU3
GO:0051436	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,K7ENY6,P49721,H3BQV2,G3V3U4,Q06323,C9J0E9,Q86SZ7
GO:0051437	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,K7ENY6,P49721,H3BQV2,G3V3U4,E7ERH2,Q06323,C9J0E9,Q86SZ7
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GO:0006457	E9PKE3,O00391,E9PR44,P10909,P13667,Q5CAQ5,Q53XJ5,D6RHJ3,P61758,P68366,O43209,F5H1S8,Q15084,A6PVN8,Q8IWX7,Q9B526,H7BZJ3,K9JA46
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GO:0030449	P01023,P01031,E9KL26,P07360,P0C0L5,E9PNW4,I3L3Q7

GO:0006091	Q5U077,Q0QF37,P04040,F5H823,B4DJV2,C9J4N6,P07954,Q6FHV6,K7EPB2,P11216,B7Z9I1,P13804,B7Z806,P13929,P15259,Q6FHU2,B4DG62,H3BRM5,B4DJ81,P30049,P35573,P36871,F2Z393,Q8N5Y3,P47985,P49327,B3KPA6,E9PPS5,H0YNF5,P51970,F8W1A4,C9JFR7,Q02218,Q04446,E9PMB9,B4DZ08,F8WDB5,B4E022
GO:0006958	F5H2D0,P01031,P02741,E9KL26,P07360,P0COL5,P10909,I3L3Q7
GO:0031093	P02768,O43707,P00488,B4DPH4,E9KL23,P01023,Q5H9A7,P02671,D3DP13,P04275,E9KL26,P08697,P10909,H9KV75,P35609,C9JEU5
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GO:0065010	P08779,P13647,Q8N1N4,P35527,P13645,P02533,P02768,K7EJ44,P07384,P13639,Q13813,D9YZU5,S4R371,Q76LA1,Q6IAT1,P17174,P02790,J3KS22,O43707,Q5U077,Q0QF37,K7ESE8,Q96K68,P12273,E9PKE3,P35908,Q06830,P25311,P15924,P81605,E7D1VW5,Q14818,Q15582,F5H823,E9PAV3,F2Z2Y4,J3KTJ1,F8VR50,O15230,O15400,D6RD66,O75369,B4DJV2,C9J4N6,O75923,G3V438,Q5SSV3,Q9P1G4,Q6FGX9,P00738,B4DPH4,E9KL23,P01023,P01031,E9PR44,P02671,P02760,P02765,P02792,Q5TZZ9,P04275,U3KPR7,E9KL26,P05543,I6L965,P06753,P07942,P07954,C9J9K3,Q6FHV6,P10909,H0YAG8,E9PNW4,P14543,Q5CAQ5,H3BNG3,Q5TD07,H0YLC7,Q86TY5,Q6FHU2,P19021,P21281,A6NLG9,B4DGX3,F2Z2S8,Q1RMG2,G3V1A4,P24752,P25786,H0YMZ1,A6NLN1,P27348,P28070,Q6IAT9,P28074,A8HT81,P30050,D9IAI1,B4E3A8,P36871,P36955,F2Z393,D3DSM4,I3L297,Q5T7N0,P47756,P49327,P49721,H3BQV2,J3KTF8,P53621,F8W1A4,F8WDD7,G3V1Y7,G3V3U4,F6RFD5,P61981,I3L3P7,M0QX76,Q96IR1,B3KQ51,E9PLD0,P62906,D0PNI1,P68133,P68366,Q00610,B2ZZ89,B4DZX0,Q04446,Q06323,Q07960,Q08257,B4DVE1,Q09666,Q13011,E7EMM4,A8K8J9,A6NE76,Q14126,Q14204,Q14894,Q15084,Q15404,B5MBZ8,Q16363,Q16531,Q16555,Q6IBS0,C9J8U2,Q8IUX7,Q96BW5,B4DV28,D6RGG3,K7ENE3,Q9BS26,K7ER15,D6RBR6,Q9HAT2,F8WF70,C9JTK6,B4DU62,Q86SZ7,G3V4S9,H7C4G5,Q9Y490,Q9Y6C2,C9J0K6,H7BZJ3,H9KV75,K7EQW8,Q8WZ42,P68032,K9JA46,B4E022,P21333,D9ZGF2,P12110,B4DIT7,C9JEU5,Q15149
GO:0042383	Q14315,Q53SB5,E9PEH6,O75923,Q5TZZ9,P11532,E9PNW4,A6NLG9,P32418,Q09666,Q15124,C9J0K6,D9ZGF2,P12110,Q15149
GO:0044291	Q13813,Q53SB5,P15924,P32418,G3XAM7,P47756,Q09666,Q15124,Q702N8,Q9Y4G6,H9KV75
GO:0030055	P13533,P12883,O75369,P11532,Q15124,Q5SZF2,H0YJ34,Q9NVD7,Q9Y490,Q9Y4G6,H9KV75,Q7Z3H5,P35609,Q15149
GO:0031143	O43707,B4DUL3,H9KV75,Q7Z3H5,P35609
GO:0005198	Q15323,P08779,P13647,Q8N1N4,P35527,P13645,P02533,G3XAP6,P02545,Q13813,Q03252,Q6ZN40,Q53SB5,Q6IB42,P35908,P35555,P15924,F8VR50,O15230,A2TDC0,O94875,E9PR44,P02549,Q5TZZ9,Q7Z612,I6L965,P07942,C9J9K3,P11532,P13535,H3BNG3,E9PBF6,A6NLG9,F2Z2S8,P25398,P30050,G3XAM7,D3DSM4,Q7Z554,Q5T7N0,A2TDB8,P51884,P52179,P53621,P54296,G3V1Y7,I3L3P7,M0QX76,Q96IR1,P62906,P68133,P68366,Q00610,B2ZZ89,F8VR69,Q05707,Q09666,O43209,Q15124,Q16363,D6RAF1,Q5VST9,D6RGG3,A8KA83,Q9Y490,Q9Y4G6,Q9Y6C2,E7EVA0,K7EQW8,Q5TCU3,P35609,Q8WZ42,P02452,Q15149
GO:0044822	K7EJ44,P13639,Q76LA1,Q6IAT1,O43707,Q0QF37,E9PKE3,Q06830,P15924,P81605,Q5STU3,B4E0R6,H3BV41,O75369,B4DJV2,O94875,I6L965,E5RGW4,Q6FH10,C9J9K3,P09382,Q53T09,P13667,H3BNG3,Q86TY5,F2Z2S8,F8W0K0,P25398,K7ENG2,A6NLN1,D6RHJ3,P30050,D9IAI1,G3XAM7,P46109,Q5T7N0,P49327,E7EU85,P61981,I3L3P7,M0QX76,J3QLI9,B7Z7P8,Q96IR1,P62906,D0PNI1,Q00610,B2Z89,F8VR69,Q05707,I3L3Q7,Q08257,Q09666,B4DY09,B1ANR0,D6RF44,Q14204,E7EQG2,C9IZL7,Q15717,Q6IBS0,H0YC73,Q702N8,Q99714,D6R9P3,Q9NQC3,B0QY90,E7EVA0,H7BZJ3,K9JA46,P21333,Q15149
GO:0070003	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,P49721,G3V3U4

GO:0005509	G3XAP6,P07384,Q13813,Q01449,Q43707,Q6FH91,P12829,Q9HB00,Q02413,Q6IB42,P35555,J3KTJ1,O14958,E9PEH6,O75923,F5H2D
CORUM:194	O,P02549,Q5TZ29,U3KPR7,E9PHK0,P11532,P13797,P14543,Q5CAQ5,P19021,Q5T7Y5,M0QZ43,D6RHJ3,G8JLH9,P55290,G3V1Y7,B4D
CORUM:191	ZX0,Q14126,B4DU62,M0R2S2,Q9UKP3,Q9UM22,C9J0K6,H9KV75,K7EQW8,P35609,Q8WZ42
CORUM:181	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,P49721,G3V3U4
CORUM:2837	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,P49721,G3V3U4
	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,P49721,G3V3U4
	K7EJ44,E9PKE3,Q00610,O43209
CORUM:193	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,K7ENY6,P49721,H3BQV2,G3V3U4,Q06323,C9J0E9,Q86SZ7
CORUM:192	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,P49721,G3V3U4,Q06323,Q86SZ7
HP:0001874	P13533,Q6FH91,Q6ZN40,Q53SB5,P12883,A2TDC0,Q9P1G4,E9PR44,P11532,K7EN02,Q7Z554,A2TDB8,F8W1A4,Q14126,Q16363,B4D
HP:0100303	UL3,P35609,Q8WZ42,P68032
	Q14315,P06753,P68133,Q549N0,Q5TCU3
HP:0001315	P02545,Q14315,Q53SB5,Q6IB42,A2TDC0,O75923,O95831,E9PR44,E9KL36,P06753,P11532,B7ZB02,E9PNW4,B4DG62,C9JG13,B4DJ8
	1,E9PPS5,P68133,Q04446,E7EMM4,Q5JXH9,Q14204,J3KRL2,B4DZ08,Q549N0,B4DUL3,Q5TCU3
HP:0003677	P13639,P02545,Q14315,P13533,P12883,H3BM67,O75923,E9PR44,D3DUJ0,Q04446,Q14204,Q549N0,Q8WZ42,D9ZGF2,P12110
HP:0001644	P02545,P13533,Q6FH91,Q6ZN40,Q53SB5,P12883,A2TDC0,E9PR44,P06753,P11532,K7EN02,P36871,Q7Z554,A2TDB8,P68133,Q5JXH
	9,Q14126,Q16363,P35609,Q8WZ42
HP:0001437	P02545,Q14315,P13533,Q53SB5,P12883,A2TDC0,E9PR44,P11532,Q5JXH9,Q14204,J3KRL2,Q8WZ42
HP:0000467	P02545,P13533,Q53SB5,P12883,E9PR44,P06753,P68133,Q549N0,Q5TCU3,Q8WZ42
	P02545,P13533,Q6FH91,Q6ZN40,Q53SB5,P12883,P35555,A2TDC0,E9PR44,P11532,K7EN02,Q7Z554,A2TDB8,Q14126,Q16363,B4DU
HP:0100578	L3,P35609,Q8WZ42,P68032,P21333
HP:0010876	P02545,Q14315,O43707,P13533,P12883,A2TDC0,O75923,O95831,E9PR44,P05543,P11532,P13929,P15259,H0YLC7,P35573,P36871
HP:0009025	,B3KPA6,J3KTF8,P68133,Q5JXH9,B4DUL3,Q8WZ42,D9ZGF2,P12110,Q15149
	P02545,A2TDC0,O75923,O95831,P12110,Q15149
HP:0000982	P08779,P13647,P35527,P13645,P02533,P13533,Q6FH91,Q6ZN40,Q53SB5,P12883,Q02413,P35908,P15924,A2TDC0,E9PR44,P11532
	,K7EN02,Q7Z554,A2TDB8,Q05707,Q14126,Q16363,B4DUL3,P35609,Q8WZ42,P68032
HP:0003198	P02545,Q14315,P13533,Q6FH91,Q6ZN40,Q53SB5,P12883,Q6IB42,A2TDC0,O75923,E9PR44,P06753,K7EPB2,P11532,P15259,K7EN0
HP:0003691	2,P35573,Q7Z554,A2TDB8,P68133,Q5JXH9,Q14126,Q16363,Q549N0,B4DUL3,Q5TCU3,P35609,Q8WZ42,P68032,D9ZGF2,P12110,Q
	15149
	P02545,P13533,Q53SB5,P12883,Q5JXH9,Q5TCU3,P21333
HP:0003457	P02545,P13533,Q6FH91,Q6ZN40,Q53SB5,P12883,A2TDC0,O75923,E9PR44,P06753,P11532,K7EN02,Q7Z554,A2TDB8,P68133,Q044
	46,E7EMM4,Q14126,Q14204,Q16363,B4DUL3,P35609,Q8WZ42,P68032,D9ZGF2,P12110
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KEGG:04530	Q13813,Q01449,O43707,P13533,P12883,Q6IB42,J3KTJ1,P13535,B3KQV6,G3XAM7,P35580,B3KQ51,F5GXJ6,A8KA83,Q9Y623,H9KV7
	5,P35609

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KEGG:01210	P17174,B3KSI3,B4DJV2,C9J4N6,H0YNF5,B4DZ08
KEGG:00020	Q0QF37,B4DJV2,C9J4N6,P07954,H0YNF5,Q02218,B4DZ08
KEGG:05414	P02545,P13533,Q6FH91,Q6ZN40,Q53SB5,P12883,Q6IB42,P06753,P11532,K7EN02,P32418,Q7Z554,K7EQW8,Q5TCU3,Q8WZ42,P68032
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KEGG:01230	P17174,P05089,B3KSI3,B4DJV2,C9J4N6,Q6FHV6,B7ZB02,P13929,P15259,Q6FHU2,F2Z393,H0YNF5,B4DZ08,B4E022
KEGG:05412	P02545,Q43707,Q53SB5,P15924,P11532,P32418,G3XAM7,Q14126,H9KV75,P35609
KEGG:05410	P02545,P13533,Q6FH91,Q6ZN40,Q53SB5,P12883,Q6IB42,P06753,P11532,K7EN02,P32418,Q7Z554,F8WDB5,K7EQW8,Q5TCU3,Q8WZ42,P68032
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KEGG:03050	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,K7ENY6,P49721,H3BQV2,G3V3U4,Q06323,C9J0E9,Q86S27
MI:hsa-miR-593*	P12829,E9PAV3,O15230,Q5SSV3,Q9P1G4,P01031,P04275,P06753,P13929,P19021,A6NLN1,P30084,B3KQV6,G3V1Y7,M0QX76,D3DVK8,Q43209,A6PVN8,Q5VST9,Q96C90,Q96HY6,F5GXT8,E7EVA0,P21333
MI:hsa-miR-219-1-3p	E7DVW5,O75923,Q9P1G4,B4DPH4,P02765,E9KL26,P05543,P05546,B7ZB02,B7Z806,E7DVW4,Q53XJ5,P30049,P46109,Q96IR1,B1ANR0,C9IZL7,E9PIR7,D6RAF1,Q711Q0,Q96PD5,B4DZ08,K7ENE3,D6RBR6,S4R313,Q9NPJ3,B0QY90,H9KV75,Q5TCU3,C9JEU5
MI:mmu-miR-700	Q15323,P02533,K7EJ44,P02144,P07384,P02545,Q05639,E9KL23,P08697,Q5CAQ5,Q1RMG2,P28074,A8HT81,P43652,E9PPS5,P54296,M0QX76,D3DUJ0,B4DZX0,I3L3Q7,D3DVK8,Q5JXH9,A6PVN8,B5MBZ8,E9PIR7,Q5VST9,Q6P1X6,D6RBR6,M0R2S2,Q9Y4G6,Q9Y6C2,H9KV75
MI:hsa-miR-149*	K7EJ44,Q6FH91,Q53SB5,Q6IB42,G3V438,Q5SSV3,E9KL23,Q5H9A7,P06753,Q5TD07,P47756,D3DVK8,Q5VST9,Q6P587,Q711Q0,Q96HY6,Q99714,B7Z3K3,M0R2S2,Q5TCU3,Q5U0D2,P12110,B4DIT7
MI:hsa-miR-509-3p	Q15323,S4R371,P05089,O14818,O15230,B3KSI3,Q5SSV3,Q9P1G4,P00738,P01031,Q5H9A7,P02671,E9KL26,P05543,P05546,Q68Y91,P10909,K7EN02,P21281,P28074,G3XAM7,P36871,I3L297,M0QX76,Q43209,Q15717,Q15746,Q16531,Q5SZF2,Q8IUX7,Q8IWX7,Q99714,Q9Y235,Q9Y6C2,Q8WZ42,P68032,D9ZGF2
REAC:212919	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,K7ENY6,P49721,H3BQV2,G3V3U4,Q06323,C9J0E9,Q86S27
REAC:354087	F5H823,P02671,D3DP13,P04275,Q9Y490,C9JEU5
REAC:377643	F5H823,P02671,D3DP13,P04275,Q9Y490,C9JEU5
REAC:372708	F5H823,P02671,D3DP13,P04275,I3L297,Q9Y490,C9JEU5
REAC:354149	F5H823,P02671,D3DP13,P04275,Q9Y490,C9JEU5
REAC:140851	P00488,P02671,D3DP13,C9JEU5
REAC:354073	F5H823,P02671,D3DP13,P04275,Q9Y490,C9JEU5
REAC:211715	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,K7ENY6,P49721,H3BQV2,G3V3U4,Q06323,C9J0E9,Q86S27

REAC:68948	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,K7ENY6,P49721,H3BQV2,G3V3U4,Q06323,C9J0E9,Q86SZ7
REAC:174255	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,K7ENY6,P49721,H3BQV2,G3V3U4,Q06323,C9J0E9,Q86SZ7
REAC:390593	P13533,Q6FH91,Q6ZN40,P12829,Q53SB5,Q6IB42,A2TDC0,P06753,P11532,P13535,G3V3L5,K7EN02,P28289,Q7Z554,P68133,K7EQW8,Q5TCU3,P35609,Q8WZ42,P68032
REAC:156842	P13639,Q7Z612,C9J9K3,H3BNG3,F2Z2S8,F8WF65,P25398,Q53YD7,E9PN91,P30050,Q5T7N0,I3L3P7,M0QX76,Q96IR1,P62906,F8VR69
REAC:114611	P02768,Q43707,P00488,B4DPH4,E9KL23,P01023,Q5H9A7,P02671,D3DP13,P04275,E9KL26,P08697,P10909,H9KV75,P35609,C9JEU5
REAC:354124	F5H823,P02671,D3DP13,P04275,Q9Y490,C9JEU5
REAC:195721	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,K7ENY6,P49721,H3BQV2,G3V3U4,E7ERH2,Q06323,C9J0E9,Q86SZ7
REAC:174113	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,K7ENY6,P49721,H3BQV2,G3V3U4,E7ERH2,Q06323,C9J0E9,Q86SZ7
REAC:188191	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,K7ENY6,P49721,H3BQV2,G3V3U4,Q06323,C9J0E9,Q86SZ7
REAC:353125	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,K7ENY6,P49721,H3BQV2,G3V3U4,Q06323,C9J0E9,Q86SZ7
REAC:180585	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,K7ENY6,P49721,H3BQV2,G3V3U4,Q06323,C9J0E9,Q86SZ7
REAC:377641	F5H823,P02671,D3DP13,P04275,Q9Y490,C9JEU5
REAC:180573	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,K7ENY6,P49721,H3BQV2,G3V3U4,E7ERH2,Q06323,C9J0E9,Q86SZ7
REAC:377640	F5H823,P02671,D3DP13,P04275,Q9Y490,C9JEU5
REAC:75825	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,K7ENY6,P49721,H3BQV2,G3V3U4,Q06323,C9J0E9,Q86SZ7
REAC:187574	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,K7ENY6,P49721,H3BQV2,G3V3U4,E7ERH2,Q06323,C9J0E9,Q86SZ7
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REAC:68825	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,K7ENY6,P49721,H3BQV2,G3V3U4,Q06323,C9J0E9,Q86SZ7
REAC:174084	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,K7ENY6,P49721,H3BQV2,G3V3U4,Q06323,C9J0E9,Q86SZ7
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REAC:69613	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P28074,K7ENY6,P49721,H3BQV2,G3V3U4,Q06323,C9J0E9,Q86SZ7
REAC:377644	F5H823,P02671,D3DP13,P04275,Q9Y490,C9JEU5
Q&T/T	t name and depth in group
GO:0006006	P17174,Q0QF37,M0R261,E9PR44,P06744,Q6FHV6,P11216,P15259,P17858,Q6FHU2,P35573,P36871,F2Z393,Q8N5Y3,Q04446,Q15124,B4E022
GO:1902400	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P49721,G3V3U4,Q53XL8,Q06323,Q86SZ7

GO:0009056	P07384,D9YZU5,P17174,Q5U077,P13533,Q6FH91,Q6ZN40,P12829,P05109,P12883,Q96P63,E9PKE3,Q06830,P05089,P04040,Q14818,Q5STU3,M0R261,O95831,P00738,B4DPH4,Q5H9A7,P02461,J9ZVQ3,A3KPE2,P02760,P06727,P06744,Q6FH10,E9P578,Q6FHV6,P09238,D6R974,P10909,P11216,Q5CAQ5,P15259,P17858,Q6FHU2,B4DG62,K7EN02,A8K0R3,Q6FGJ9,A6NLG9,P25786,H0YMZ1,P28070,Q6IAT9,A8HT81,E5RG13,P30048,B3KQV6,P35573,P36871,F2Z393,D3DSM4,P42126,I3L297,C9IY88,Q8N5Y3,P49721,P51884,Q8N9C4,G3V3U4,Q53XL8,C9JFR7,Q05707,Q06323,Q07092,Q13011,D6RF44,E7EQG2,A6PVN8,Q16531,Q16555,Q6UVK1,Q8TBN0,Q96PD5,D6RG63,C9JTK6,Q9UBG0,E9PPU6,Q86S27,P68032,K9JA46,B4E022,P21333,P02452,D9ZGF2,P12110
GO:0006096	Q5U077,P06744,Q6FHV6,P15259,P17858,Q6FHU2,B4DG62,P36871
GO:0006521	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P49721,G3V3U4,Q53XL8,Q06323,Q86S27
GO:0051436	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P49721,G3V3U4,Q53XL8,Q06323,Q86S27
GO:0002576	P02768,Q43707,D6RD66,P00488,B4DPH4,E9KL23,P01023,Q5H9A7,P02671,D3DP13,P02751,P02787,P04275,E9KL26,B4E1L6,P08697,P10909,Q9Y490,H9KV75,P35609,Q8WZ42,P21333,C9JEU5
	Q86YZ3,Q15323,P08779,P13647,P35527,P13645,P02533,P02768,Q04695,P05787,G3XAP6,P02144,P07384,P02545,Q13813,Q14315,D9YZU5,S4R371,Q6IAT1,P17174,P02790,Q43707,Q5U077,P06732,P13533,Q6FH91,Q6ZN40,Q0QF37,P12829,P05109,Q9HB00,P01040,Q53S85,P12883,Q02413,C3PTT6,Q6IB42,Q96K68,P12273,E9PKE3,P35908,Q06830,P05089,Q05639,P35555,P25311,P15924,P04040,O14818,Q15582,Q5STU3,Q5SRT3,O00391,B4E0R6,Q96AR9,O14958,O15230,E9PEH6,D6RD66,O75339,O75369,B4DJV2,Q5SR54,M0R261,O95831,P00488,P00738,B4DPH4,Q96EF3,E9KL23,P01023,P01031,Q5H9A7,P01859,P01861,P02461,E9PR44,J9ZVQ3,A3KPE2,P02671,D3DP13,P02750,P02751,P02760,P02765,E9KL36,P02787,P02792,Q5TZZ9,P04275,E9KL26,Q6LAM0,E9PHK0,P05543,P05546,I6L965,B4DQI1,P06727,P06744,P06753,B4E1L6,Q6FH10,E9P578,P07942,P07954,P08697,C9J6H2,Q6FHV6,P09238,F5H7T4,D6R974,P0C0L4,P0C0L5,P10909,P11216,P11532,H7BYX6,P13667,P13797,P14543,Q5CAQ5,P15259,P17858,Q6FHU2,B4DG62,K7EN02,A8K0R3,Q6FGJ9,A6NLG9,P22061,E7EPZ9,P23141,Q1RMG2,F8VYK9,P25786,H0YMZ1,P27348,P28070,Q6IAT9,A8HT81,E5RG13,P30048,Q5TOD2,B3KQV6,B4DHX4,P31151,P31947,G3XAM7,B0YJ88,P35442,P35573,B4DND4,P36871,P36955,F2Z393,D3DSM4,E9PDI2,P42126,P43251,P43652,I3L297,C9IY88,Q8N5Y3,P47756,P49721,P50135,B4DN87,P51884,P52179,J3KTF8,Q8N9C4,C9JQZ8,P54296,H3BUU9,P55290,G3V3U4,P61981,Q53XL8,D2JYH4,E9PLD0,D0PNI1,Q9UNL6,C9JFR7,Q00610,B2ZZ89,E9PC41,Q02952,Q04446,Q05682,Q05707,Q06323,Q07092,Q07954,Q07960,B4DVE1,E7EVH9,D3DQB3,Q9BZQ0,Q13011,H7C5L0,A8K8J9,Q5JXH9,Q14126,E7EQG2,Q15084,Q15124,A6PVN8,Q15404,Q15746,Q16363,Q16531,Q16555,C8CHS3,Q16853,E9PIR7,D6RAF1,Q5TCX8,Q6IBS0,Q6UVK1,Q6YHK3,Q7P01040,P15924,P00488,P02461,P02751,Q5TZZ9,Q6FH10,A6NLG9,B4DIT7
GO:0044699	
GO:0018149	
GO:0006956	P01023,P01031,P01859,P01861,E9KL26,Q6LAM0,B4DQI1,B4E1L6,F5H7T4,P0C0L4,P0C0L5,P10909,A8K008
GO:0006977	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P49721,G3V3U4,Q53XL8,Q06323,Q86S27
GO:0055002	P05787,P02545,Q14315,P13533,Q6ZN40,Q6IB42,D6R974,P11532,P47756,Q05707,Q8WZ42,P68032
	P08779,P35527,P02533,Q04695,P05787,P02545,Q13813,Q43707,P13533,Q6ZN40,P05109,Q53S85,Q6IB42,P15924,O15230,O75369,E9PR44,J9ZVQ3,P08697,Q5CAQ5,E7EPZ9,B0YJ88,E9PDI2,I3L297,P47756,B2ZZ89,Q07954,H7C5L0,A8K8J9,A6PVN8,Q15746,Q16555,D6RAF1,Q6IBS0,Q71U36,Q9NVD7,B4E3S0,Q9Y490,H9KV75,Q8WZ42,P68032,P21333
GO:0007010	
GO:0072376	Q96EF3,P01023,P01031,P01859,P01861,P04275,E9KL26,Q6LAM0,B4DQI1,B4E1L6,F5H7T4,P0C0L4,P0C0L5,P10909,A8K008
GO:0016051	P17174,Q0QF37,P06744,Q6FHV6,P15259,Q6FHU2,E5RG13,P35573,P36871,F2Z393,Q8N5Y3,Q00610,Q04446,B7Z3K3,B4E022
GO:0006958	P01031,P01859,P01861,E9KL26,Q6LAM0,B4DQI1,F5H7T4,P0C0L4,P0C0L5,P10909,A8K008
GO:0003229	P13533,Q6FH91,Q6ZN40,P12883,Q6IB42,P15924,K7EN02,Q05707
GO:0031145	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P49721,G3V3U4,Q53XL8,Q06323,Q86S27
GO:0046496	Q5U077,Q0QF37,M0R261,Q6FHU2,F2Z393,C9IY88,B4E022
GO:0044262	P17174,Q5U077,Q0QF37,B4DJV2,P06744,Q6FHV6,P11216,P15259,P17858,Q6FHU2,B4DG62,E5RG13,P35573,P36871,Q8N5Y3,Q8N9C4,Q04446,B7Z3K3,E9PPU6

GO:0070161 GO:0005577	Q13813,P13533,Q9HB00,Q53SB5,P12883,Q02413,P15924,O75369,P31151,G3XAM7,Q14126,Q15124,H0YJ34,Q9NVD7,F5GX07,Q9Y490,H9KV75,P35609,Q15149 P02671,D3DP13,P02751,P08697,C9JEU5
GO:0065010 GO:0014704	Q86YZ3,P08779,P13647,Q8N1N4,P35527,P13645,P02533,P02768,Q04695,P05787,Q86Y46,P07384,P13639,Q13813,D9YZU5,S4R371,Q6IAT1,P17174,P02790,O43707,Q5U077,Q5T749,Q0QF37,P05109,K7ESE8,C3PTT6,Q96K68,P12273,E9PKE3,P35908,Q06830,P25311,P15924,P81605,O14818,Q15582,Q5SRT3,Q96AR9,O15230,D6RD66,O75369,B4DJV2,MOR261,P00738,B4DPH4,E9KL23,P01023,P01031,E9PR44,J9ZVQ3,P02671,P02751,P02760,P02765,P02787,P02792,Q5TZZ9,P04275,E9KL26,Q6LAM0,P05543,I6L965,P06744,P06753,E9PS78,P07942,P07954,Q6FHV6,P10909,P14543,Q5CAQ5,P17858,Q6FHU2,Q6AWD1,A6NLG9,Q1RMG2,P25786,H0YMZ1,P27348,P28070,Q6IAT9,A8HT81,Q5TOD2,D9IAI1,B4E3A8,P31947,B0YJ88,P36871,P36955,F2Z393,D3DSM4,I3L297,P47756,P49721,P50135,J3KTF8,Q8N9C4,G3V3U4,P61981,E9PLD0,D0PNI1,Q00610,B2ZZ89,Q04446,Q06323,Q07960,B4DVE1,Q13011,A8K8J9,Q14126,Q15084,Q53SS8,Q15404,B5MBZ8,Q16363,Q16531,Q16555,C8CHS3,Q562R1,Q6EMK4,Q6IBS0,Q6UWP8,Q71U36,Q8IUX7,B4DV28,D6RGG3,C9JTK6,E9PPU6,Q86SZ7,Q9UM54,Q9Y490,Q9Y5Z4,E9PPL6,H9KV75,K7ERG3,Q8WZ42,P68032,K9JA46,B4E022,P21333,D9ZGF2,P12110,B4DIT7,C9JEU5,Q15149 Q13813,Q53SB5,P15924,G3XAM7,P47756,Q15124,H9KV75
GO:0005581	Q96AR9,P02461,Q6FH10,D3DSM4,P51884,Q05707,Q07092,E5RK99,D6RGG3,P02452,D9ZGF2,P12110
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GO:0031012	P02768,G3XAP6,P02790,P35555,Q15582,O15230,O75339,E9KL23,Q5H9A7,P02461,P02751,P04275,P06753,Q6FH10,P07942,P09238,P14543,A8K0R3,A6NLG9,E7EPZ9,P35442,D3DSM4,P51884,Q05707,Q07092,B4DVE1,D3DQB3,Q16363,C8CHS3,Q7Z7G0,E5RK99,D6RGG3,Q9HCU0,J3QSU6,K7ERG3,P02452,D9ZGF2,P12110
GO:0044421	Q86YZ3,Q15323,P08779,P13647,Q8N1N4,P35527,P13645,P02533,P02768,Q04695,P05787,Q86Y46,G3XAP6,P07384,P13639,Q13813,D9YZU5,S4R371,Q6IAT1,P17174,P02790,O43707,Q5U077,Q5T749,Q0QF37,P05109,K7ESE8,Q96P63,C3PTT6,Q96K68,P12273,E9PKE3,P35908,Q06830,P05089,P35555,P25311,P15924,P81605,O14818,Q15582,Q5SRT3,O00391,Q96AR9,O15230,D6RD66,O75339,O75369,B4DJV2,MOR261,P00488,P00738,B4DPH4,Q96EF3,E9KL23,P01023,P01031,Q5H9A7,P01859,P01861,P02461,E9PR44,J9ZVQ3,A3KPE2,P02671,D3DP13,P02750,P02751,P02760,P02765,E9KL36,P02787,P02792,Q5TZZ9,P04275,E9KL26,Q6LAM0,E9PHK0,P05543,P05546,I6L965,B4DQI1,P06727,P06744,P06753,B4E1L6,Q6FH10,E9PS78,P07942,P07954,P08697,C9J6H2,Q6FHV6,P09238,F5H7T4,P0COL4,P0COL5,P10909,P14543,Q5CAQ5,P17858,Q6FHU2,P19652,A8K0R3,Q6AWD1,A6NLG9,E7EPZ9,Q1RMG2,F8VYK9,P25786,H0YMZ1,P27348,P28070,Q6IAT9,A8HT81,Q5TOD2,D9IAI1,B4E3A8,P31947,B0YJ88,P35442,P36871,P36955,F2Z393,D3DSM4,P43251,P43652,I3L297,P47756,P49721,P50135,B4DN87,P51884,J3KTF8,Q8N9C4,P55290,G3V3U4,P61981,D2JYH4,E9PLD0,D0PNI1,Q9UNL6,Q00610,B2ZZ89,Q04446,Q05707,Q06323,Q07092,Q07960,B4DVE1,D3DQB3,Q9BZQ0,Q13011,A8K8J9,Q14126,Q15084,Q53SS8,Q15404,B5MBZ8,Q16363,Q16531,Q16555,C8CHS3,Q562R1,Q6EMK4,Q6IBS0,Q6UWP8,Q6YHK3,Q71U36,Q7Z7G0,Q8IUX7,Q8NCW5,E5RK99,B4DV28,D6RGG3,Q9HCU0,C9JTK6,H7C3D2,E9PPU6,Q86SZ7,Q9UM54,Q9Y490,Q9Y5Z4,A8K008,D6RF35,E9PPL6,H9KV75,J3QSU6,K7ERG3,Q8WZ42,P68032,K9JA46,B4E022,P21333,P02452,D9ZGF2,P12110,B4DIT7,C9JEU5,Q15149
GO:0043292	P05787,Q13813,Q14315,O43707,P13533,Q6FH91,Q6ZN40,P12829,Q53SB5,P12883,Q6IB42,O14958,O75369,O94875,E9PR44,P06753,P11532,K7EN02,P47756,P52179,P54296,G3V3U4,D2JYH4,B2ZZ89,Q05682,Q15124,D6RAF1,Q5VTT5,Q6IBS0,H0YJ34,Q9NVD7,H9KV75,K7ERG3,P35609,Q8WZ42,P68032,Q15149

GO:0031983 GO:0070003	P02768,D9YZU5,P02790,O43707,P00488,P00738,B4DPH4,E9KL23,P01023,Q5H9A7,J9ZVQ3,P02671,D3DP13,P02751,P02787,P04275,E9KL26,B4E1L6,P08697,P10909,Q5CAQ5,H9KV75,P35609,K9JA46,C9JEU5 O14818,P25786,H0YMZ1,P28070,Q6IAT9,P49721,G3V3U4
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GO:0005509	Q86YZ3,G3XAP6,P07384,Q13813,O43707,Q6FH91,P12829,P05109,Q9HB00,Q02413,Q6IB42,P35555,O14958,E9PEH6,Q5SR54,Q5TZ Z9,E9PHK0,B4E1L6,P09238,F5H7T4,P11532,P13797,P14543,Q5CAQ5,P31151,P35442,H3BUU9,P55290,Q07954,D3DQB3,Q9BZQ0,Q 14126,Q16853,Q9HCU0,H9KV75,K7ERG3,P35609,Q8WZ42
GO:0005539 GO:0004298	G3XAP6,J9ZVQ3,P02751,E9PHK0,P05546,Q6FH10,P13727,A6NLG9,E7EPZ9,P35442,Q9BZQ0,Q7Z7G0,Q96PD5 O14818,P25786,H0YMZ1,P28070,Q6IAT9,P49721,G3V3U4
GO:0005198 CORUM:191 CORUM:194 CORUM:181 CORUM:193 CORUM:192 HP:0001430 HP:0001724 HP:0003457 HP:0100578 HP:0001644 HP:0011006 HP:0003701	Q15323,P08779,P13647,Q8N1N4,P35527,P13645,P02533,Q04695,P05787,Q86Y46,G3XAP6,P02545,Q13813,Q03252,Q6ZN40,P010 40,Q53SB5,Q6IB42,P35908,P35555,P15924,O15230,O94875,P02461,E9PR44,Q5TZZ9,I6L965,P07942,P11532,A6NLG9,G3XAM7,D3D SM4,P51884,P52179,C9JQZ8,P54296,Q00610,B2ZZ89,Q05707,Q15124,Q16363,D6RAF1,Q71U36,D6RGG3,Q9Y490,K7ERG3,P35609, Q8WZ42,P02452,Q15149 O14818,P25786,H0YMZ1,P28070,Q6IAT9,P49721,G3V3U4 O14818,P25786,H0YMZ1,P28070,Q6IAT9,P49721,G3V3U4 O14818,P25786,H0YMZ1,P28070,Q6IAT9,P49721,G3V3U4,Q53XL8 O14818,P25786,H0YMZ1,P28070,Q6IAT9,P49721,G3V3U4,Q53XL8,Q06323,Q86SZ7 O14818,P25786,H0YMZ1,P28070,Q6IAT9,P49721,G3V3U4,Q06323,Q86SZ7 P02545,Q14315,P13533,Q53SB5,P12883,P11532,Q8WZ42 P02545,P35555,O75369,P02461,E7EPZ9,D2JYH4,Q15746,P21333,P02452 P02545,P13533,Q6FH91,Q6ZN40,Q53SB5,P12883,E9PR44,P06753,P11532,K7EN02,Q04446,Q14126,Q16363,P35609,Q8WZ42,P680 32,D9ZGF2,P12110 P02545,P13533,Q6FH91,Q6ZN40,Q53SB5,P12883,P35555,E9PR44,P11532,K7EN02,Q14126,Q16363,P35609,Q8WZ42,P68032,P213 33 P02545,P13533,Q6FH91,Q6ZN40,Q53SB5,P12883,E9PR44,P06753,P11532,K7EN02,P36871,Q5JXH9,Q14126,Q16363,P35609,Q8WZ 42 P02545,P13533,Q53SB5,P12883,E9PEH6,E9PR44,P06753,Q8WZ42,D9ZGF2,P12110
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KEGG:05410	P02545,P13533,Q6FH91,Q6ZN40,Q53SB5,P12883,Q6IB42,P06753,P11532,K7EN02,K7ERG3,Q8WZ42,P68032
KEGG:01230	P17174,P05089,B4DJV2,Q6FHV6,P15259,P17858,Q6FHU2,F2Z393,B4E022
KEGG:03050	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P49721,G3V3U4,Q53XL8,Q06323,Q86SZ7
KEGG:00010	Q5U077,P06744,Q6FHV6,P15259,P17858,Q6FHU2,B4DG62,P36871
KEGG:04512	G3XAP6,O15230,P02461,P02751,P04275,P07942,E7EPZ9,P35442,Q16363,J3QSU6,P02452,D9ZGF2,P12110
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KEGG:05412	P02545,O43707,Q53SB5,P15924,P11532,G3XAM7,Q14126,H9KV75,P35609
KEGG:05150	P13645,Q02413,B4DPH4,P01031,Q6LAM0,B4DQI1,F5H7T4,POCOL4,POCOL5,C9JEU5
KEGG:05414	P02545,P13533,Q6FH91,Q6ZN40,Q53SB5,P12883,Q6IB42,P06753,P11532,K7EN02,K7ERG3,Q8WZ42,P68032
KEGG:05146	O43707,P05089,O15230,P02461,P02751,P07942,B4E3A8,Q16363,H9KV75,P35609,P02452
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MI:hsa-miR-886-5p	P35527,Q13813,P02790,P25311,O15230,P01861,P06744,P06753,B3KQV6,P31947,B4DND4,C9IY88,J3KTF8,C9JQZ8,D2JYH4,Q07092, Q13011,H7C5L0,Q14126,E9PPU6,Q9Y490,Q8WZ42,P21333,Q5U0D2,P12110
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REAC:68825	7,P36871,I3L297,C9IY88,Q15746,Q16531,Q8IUX7,E5RK99,E7ESF6,Q8WZ42,P68032,D9ZGF2 O14818,P25786,H0YMZ1,P28070,Q6IAT9,P49721,G3V3U4,Q53XL8,Q06323,Q86SZ7
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REAC:372708	P02671,D3DP13,C9JEU5
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REAC:174113	O14818,P25786,H0YMZ1,P28070,Q6IAT9,P49721,G3V3U4,Q53XL8,Q06323,Q86SZ7
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GO:0065008	MYH6,Q6FH91,Q6ZN40,MYL4
GO:0043462	MYH6,Q6FH91,Q6ZN40,Q6IB42
GO:0055010	MYH6,Q6FH91,Q6ZN40,MYL4,Q53SB5,Q6IB42
GO:0060047	RTP3,PIGR,PIP
GO:0001580	MYH3,MYH6,Q6ZN40,Q6IB42
GO:0030239	MYH3,LMNA,MYH6,Q6FH91,Q6ZN40,Q6IB42,D9ZGF2,Q5U0D2
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GO:0001895	J3KS22,Q5U077,Q0QF37,B4E022
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GO:0005509	MYH3,FLNC,ACTN4,MYH6,Q6FH91,Q6ZN40,MYL4,Q6IB42,PIP,ACTN2,FLNA,Q5U0D2
GO:0003779	ACTN4,E9PKE3
CORUM:725	LMNA,MYH6,Q6FH91,Q6ZN40,Q53SB5,ACTN2,D9ZGF2
HP:0003457	LMNA,MYH6,Q6FH91,Q6ZN40,Q53SB5,FBN1,ACTN2,FLNA
HP:0100578	LMNA,MYH6,Q53SB5,FLNA
HP:0003691	LMNA,FLNC,MYH6,Q53SB5
HP:0001430	LMNA,D9YZU5,MYH6,Q6FH91,Q6ZN40,Q53SB5,Q6IB42,ACTN2
HP:0001639	FBN1,FLNA
HP:0001704	LMNA,MYH6,Q6FH91,Q6ZN40,Q53SB5,DSG1,ACTN2,D9ZGF2
HP:0000962	LMNA,MYH6,Q6FH91,Q6ZN40,Q53SB5,ACTN2
HP:0001644	LMNA,FLNC,MYH6,D9ZGF2
HP:0008180	LMNA,FLNC,MYH6,Q6FH91,Q6ZN40,Q53SB5,Q6IB42,ACTN2,D9ZGF2
HP:0003198	LMNA,MYH6,Q6ZN40,Q53SB5,FBN1,FLNA
HP:0001635	H0YIS1,D6RA88,FLNC,ACTN4,Q6IB42,ACTN2,FLNA,D9ZGF2
KEGG:04510	LMNA,MYH6,Q6FH91,Q6ZN40,Q53SB5,Q6IB42
KEGG:05410	



KEGG:05412	LMNA,ACTN4,Q53SB5,ACTN2
KEGG:04530	MYH3,D6RA88,ACTN4,MYH6,Q6IB42,ACTN2
KEGG:04260	MYH6,Q6FH91,Q6ZN40,MYL4,Q6IB42
KEGG:05414	LMNA,MYH6,Q6FH91,Q6ZN40,Q53SB5,Q6IB42
KEGG:04261	MYH6,Q6FH91,Q6ZN40,MYL4,Q6IB42
MI:mmu-miR-695	PPM1L,H9ZYJ2,D9YZU5,B3KVA7,J3KS22,Q6FH91,J3KRG2,D9ZGF2
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