

**Table S2.**

<b>Reference code</b>	<b>Microorganism</b>	<b>Protein function</b>	<b>Protein identification/ Patent number</b>	<b>Blast X PDB Query cover/ID (%)</b>
Unc_US20050153404_pharma	Unculturable strain	Lipase - preparing of enantiomeric enriched esters and alcohols	US20050153404	1Q0R 89/28
Pfl_P22862_1VA4	<i>Pseudomonas fluorescens</i>	Esterase - increasing the already-existing perhydrolase activity	US7384787	1VA4 99/100
Pal_WO9530744_detergent	<i>Pseudomonas alcaligenes</i>	Lipase - improved resistance to surfactants	WO9530744	1EX9 90/81
Sgr_WO2011150157_detergent	<i>Streptomyces griseus</i>	Lipase - highly suitable as detergent	WO2011150157	3D2C 38/39
Psa_WO2010134035_food	<i>Pelomonas saccharophila</i>	Lipase - combined enzymes, preparing bread and baking	WO2010134035	1GCY 97/94
Sri_WO2010065455_detergent	<i>Streptomyces</i>	Lipase - removal	WO2010065455	4HYQ

	<i>grimosus</i>	of oily stains from fabric	85/65
Ssp_WO2006008653_food	<i>Streptomyces sp.</i>	Lipase - hydrolysis of glycolipids and phospholipids	WO2006008653 -
Lre_US20100216212_pharma	<i>Lactobacillus reuteri</i>	Lipase - anti- obesity activity	US20100216212 -
Tla_WO2006136159_pharma	<i>Thermomyces lanuginosus</i>	Lipase - treatment of human disorders	WO2006136159 2YIJ 32/27
Mgr_WO2007096201_food	<i>Magnaporthe griseae</i>	Lipase - baking, degumming, food emulsifiers	WO2007096201 2YIJ 47/24
Fox_US20030180418_food	<i>Fusarium oxysporum</i>	Lipase - doughs or baked products	US20030180418 2YIJ 44/25
Unk_WO2009106575_food	Unknown strain	Lipase - dairy or baking industry	WO2009106675 2YIJ 45/25
Rsp_WO2007128496_chemicals	<i>Rhodococcus sp.</i>	Esterase - production of fine chemicals	WO2007128496 -
Bsp_WO2008032007_biofuel	<i>Bacillus sp</i>	Lipase - biodiesel production	WO2008032007 -
Dgr_WO2004064537_food	<i>Digitalis grandiflora</i>	Lipase - food emulsifiers	WO2004064537 4LIX 30/28
Unk_WO2007128441_chemicals	Unknown	Esterases -	WO2007128441 -

		production of fine chemicals		
Mth_WO2012078741_industrial	<i>Myceliophthora</i> <i>thermophila</i>	Esterases - industrial food, bioremediation, biorefining, detergents	WO2012078741	24/30
Csp_CN101957838_bioremediation	<i>Culex sp</i>	Esterases - bioremediation of organic phosphorus	CN101957838	4FNM 98/38
Lcu_US5843758_bioremediation	<i>Lucilia cuprina</i>	Esterases - bioremediation of organic phosphate and carbamate	US5843758	4FG5 100/99

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