

	10	20	30	40	50	60	70	80	90																																											
UG-sparatoxin-Hdb12/1-28						D	C	V	G	H	M	G	W	C	A	W	T	D	S	E	C	C	E	G	Y	R	C	L	W	C	K	I																				
UG-sparatoxin-Hdb21/1-33										G	D	D	T	C	I	G	W	M	G	W	C	S	G	K	N	I	G	C	C	E	G	Y	K	E	L	W	C	K	Y	A												
UG-sparatoxin-Hdb22/1-34										M	A	R	D	D	D	K	K	C	V	G	H	M	G	W	C	A	W	T	D	S	E	C	C	V	G	Y	R	C	L	M	C											
UG-sparatoxin-Hdb19/1-34										D	D	D	K	K	C	V	G	H	M	G	W	C	A	W	T	D	S	E	C	C	V	G	Y	R	C	L	W	C	R	K	I											
UG-sparatoxin-Hdb20/1-36										G	D	D	E	C	I	G	W	M	G	W	C	S	G	K	D	K	C	C	K	N	V	C	N	L	W	C	R	Y	K	A	D	V										
UG-sparatoxin-Hdb14/1-40										D	C	I	G	W	M	G	W	C	S	G	K	D	K	C	C	K	N	V	C	N	L	W	C	R	Y	K	A	D	V	L	D	I	S	L	I	R						
UG-sparatoxin-Hdb17/1-40										D	D	D	K	K	C	I	G	H	M	G	W	C	A	W	T	D	S	E	C	C	V	G	Y	R	C	L	W	C	R	K	I	D	W	L	G	D						
UG-sparatoxin-Hdb16/1-31										D	D	C	I	G	W	M	G	L	C	S	S	E	K	C	C	E	G	Y	A	C	E	V	W	C	K	Y	D															
UG-sparatoxin-Hdb11/1-47										D	C	I	G	H	M	G	W	C	A	W	T	D	S	E	C	C	V	G	Y	R	C	L	W	C	R	K	C	V	L	T	R	S	T	T	A	L	C	P	D	S	S	I
UG-sparatoxin-Hdb18/1-37										D	D	C	I	G	W	M	G	L	C	S	S	E	K	C	C	E	G	Y	A	C	E	V	W	C	K	Y	D	L	D	G	E	K	V									
UG-sparatoxin-Hdb15/1-30																D	C	N	G	W	T	A	W	C	N	N	C	E	D	F	V	C	N	I	W	C	S	L	K	Q	A	L	K	E								
UG-sparatoxin-Hdb23/1-34																E	D	D	K	D	C	N	G	W	T	A	W	C	N	N	C	E	D	F	V	C	N	I	W	C	S	L	K	Q	A	L	K	E				
UG-sparatoxin-Hdb13/1-31																D	C	I	G	W	M	G	W	C	S	G	K	E	L	K	C	C	E	H	V	C	S	L	W	C	K	K	L	G								

Q2PAY4\_Beta/kappa-theraphotoxin-Cg2a\_Chilobrachys\_guangxiensis/1-83 MKASVFAVILGLVLVLCACSF AEDEQDQFVSPNELLKSMF VESRHEFTPEVEGRYCQKWMW TCDSKRA**DCE****SLR****CKLW****CR**KIIG.....

