

**Neuron:** SX1-Sp1-SNAP25-Sp2-Vamp2  
**GLUT4:** SX4-Sp1-SNAP23-Sp2-Vamp2  
**Endosome:** SX13-Sp1-VtiA-Sp3-SX6-Sp2-Vamp4  
**Yeast:** Sso1-Sp1-SEC9-Sp2-Snc2

	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	+8	LD																																																																					
<b>SX1 (181-233) :</b>	I	I	M	D	S	S	I	S	K	Q	A	L	S	E	I	E	T	R	H	S	E	I	I	K	L	E	N	S	I	R	E	L	H	D	M	F	M	D	M	A	M	L	V	E	S	Q	G	E	M	I	D	R	I	E	Y	N	V	E	H	A	V	D	V	E	R	A	V	S	D	T	K	K	A	V	K	Y	Q	S	K	A	R					
<b>SX4 (189-270) :</b>	I	L	K	D	T	Q	T	R	Q	A	L	N	E	I	S	A	R	H	S	E	I	Q	Q	L	E	R	T	I	R	E	L	H	E	I	F	T	F	L	A	T	E	V	E	M	Q	G	E	M	I	N	R	I	E	K	N	I	L	S	A	D	Y	V	E	R	G	Q	E	H	V	K	I	A	L	E	N	Q	K	K	A	R						
<b>SX13 (167-248) :</b>	Q	E	E	E	A	A	I	T	E	Q	D	L	E	L	I	K	E	R	E	T	A	I	Q	Q	L	E	A	D	I	L	D	V	N	Q	I	F	K	D	L	A	M	M	I	H	D	Q	G	D	L	I	S	I	E	A	N	V	E	S	E	V	H	E	R	A	S	D	Q	L	Q	R	A	A	Y	Q	K	K	S	R								
<b>Sso1 (177-260) :</b>	L	L	N	A	N	R	R	G	E	A	K	T	A	L	E	A	V	Q	A	R	H	Q	E	L	L	K	L	E	K	S	M	A	E	L	T	Q	L	F	N	D	M	E	E	L	V	I	E	Q	Q	E	N	V	D	V	I	D	K	N	V	E	D	A	Q	L	D	V	E	Q	G	V	G	H	T	D	K	A	V	K	S	A	R	K	A	R		
<b>Sp1 :</b>	G	G	S	N	R	S	G	G	S	D	S	G	G	S	C	Q	G	S	S	G	A	G	G	S	L	N	S	K	S	S	G	G	S	G	S	A	N	S	T	A	S	N	S	G	Q	G	S	G	G	I	E	G	L	S	G																															
<b>Sp1 :</b>	G	G	S	N	R	C	G	G	S	D	S	G	G	S	Q	G	S	S	G	A	G	G	S	L	N	S	K	S	S	G	G	S	G	S	A	N	S	T	A	S	N	S	G	Q	G	S	G	G	I	E	G	L	S	G																																
<b>Sp1 :</b>	G	G	S	N	R	S	G	G	S	D	S	G	G	S	C	Q	G	S	S	G	A	G	G	S	L	N	S	K	S	S	G	G	S	G	S	A	N	S	T	A	S	N	S	G	Q	G	S	G	G	I	E	G	L	S	G																															
<b>Sp1 :</b>	G	G	S	N	R	S	G	G	S	D	S	G	G	S	C	Q	G	S	S	G	A	G	G	S	L	N	S	K	S	S	G	G	S	G	S	A	N	S	T	A	S	N	S	G	Q	G	S	G	G	I	E	G	L	S	G																															
<b>SN25N (1-83) :</b>	M	A	E	D	A	D	M	R	N	E	L	E	E	M	Q	R	R	A	D	Q	L	A	D	E	S	L	E	S	T	R	R	M	L	Q	L	V	E	E	S	K	D	A	G	I	R	T	L	V	M	L	D	E	Q	Q	E	Q	L	E	R	I	E	E	G	M	D	Q	I	N	K	D	M	K	E	A	E	K	N	L	T	D	L	G	K			
<b>SN23N (1-78) :</b>	M	D	D	L	S	P	E	E	I	Q	L	R	A	H	Q	V	T	D	E	S	L	E	S	T	R	R	I	L	G	L	A	I	E	S	Q	D	A	G	I	K	T	I	T	M	L	D	E	Q	Q	E	Q	L	N	R	I	E	E	G	M	D	Q	I	N	K	D	M	R	E	A	E	K	T	L	T	E	L	N	K								
<b>VtiA (111-199) :</b>	S	E	N	Q	L	I	K	L	R	E	E	R	A	H	L	L	D	N	T	E	R	L	E	R	S	S	R	L	E	A	G	Y	Q	I	A	V	E	T	E	Q	I	Q	E	M	L	N	L	S	H	D	R	E	R	I	Q	R	A	R	E	R	L	R	E	T	D	A	N	L	G	K	S	S	R	I	L	T	G	M	L	R	R	I	I	Q	N	R
<b>SEC9N (421-498) :</b>	E	E	D	E	A	V	D	E	I	K	Q	E	I	K	F	T	K	Q	S	S	V	A	T	R	N	T	L	K	M	A	Q	A	E	R	A	G	M	T	L	G	M	L	G	H	Q	S	E	Q	L	N	N	V	E	G	N	L	D	L	M	K	V	N	K	V	A	D	E	K	V	A	E	L	K	K												
<b>SN25 (84-138) :</b>	F	S	G	L	S	V	S	P	S	N	K	L	K	S	S	D	A	Y	K	K	A	W	G	N	N	Q	D	G	V	V	A	S	Q	P	A	R	V	V	D	E	R	E	Q	M	A	I	S	G	G	F	I	R	R	V	T																															
<b>SN23 (79-143) :</b>	S	S	G	L	S	V	S	P	N	R	T	K	N	F	E	S	G	K	N	Y	K	A	T	W	G	D	G	D	S	S	P	S	N	V	V	S	K	Q	P	S	R	I	T	N	G	P	Q	T	T	G	A	S	G	G	Y	I	K	R	I	T																										
<b>Sp3 :</b>	G	S	L	N	S	K	S	A	G	S	G	S	G	S	V	S	P	S	N	K	L	K	S	S	D	A	Y	K	K	A	W	G	N	N	Q	D	G	V	V	A	S	Q	S	G	A	N	S	G	G	L	K	G	Q	S	S	G																														
<b>SEC9 (499-587) :</b>	L	N	R	S	I	L	A	V	H	V	S	N	P	F	N	S	K	R	R	R	R	E	R	E	E	Q	L	K	N	R	K	I	E	E	K	L	M	R	E	Q	T	S	Q	L	S	Q	S	T	Q	R	I	E	G	A	M	N	A	N	N	I	S	E	V	R	E	R	Y	Q	R	K	N	V	L	E	K	A	K	R	Y	Q	F	E	N	D	E	
<b>SN25C (139-206) :</b>	N	D	A	R	E	N	E	M	D	E	N	L	E	Q	V	S	G	I	G	N	L	R	H	M	A	L	D	M	G	N	E	I	D	T	Q	N	R	Q	I	D	R	I	E	M	E	K	A	D	S	N	K	T	R	I	D	E	A	N	Q	R	A	T	K	M	L	G	S	G																		
<b>SN23C (144-210) :</b>	N	D	A	R	E	D	E	M	E	E	N	L	T	Q	V	S	G	I	L	G	N	L	K	N	M	A	L	D	M	G	N	E	I	D	A	Q	N	Q	I	Q	K	I	T	E	K	A	D	T	N	K	N	R	I	D	I	A	N	T	R	A	K	K	L	I	D	S																				
<b>SX6 (159-234) :</b>	Q	A	Q	Q	L	I	V	E	Q	D	E	Q	L	E	L	V	S	G	I	G	V	L	K	N	M	S	Q	R	I	G	G	E	L	E	E	Q	A	V	M	L	E	D	F	S	H	E	L	E	S	T	Q	S	R	L	D	N	V	M	K	L	A	K	V	S	H	M	T	S	D	R	R	Q														
<b>SEC9C (588-651) :</b>	D	E	M	E	L	E	I	D	R	N	L	D	Q	I	Q	V	S	N	R	L	K	K	M	A	L	T	G	K	E	L	D	S	Q	Q	K	R	L	N	N	I	E	E	S	T	D	D	L	D	I	N	L	H	M	T	N	R	L	A	G	I	R																									
<b>Sp2 :</b>	S	G	G	S	N	R	G	G	S	D	S	G	G	S	G	G	I	E	G	L	G	G	S	S	G	A	S	G	G	L	K	N	S	G	S	G	S	G	S	N	A	S	N	S	G	Q	G	S	S	G	G																																			
<b>Sp2 :</b>	G	S	G	S	N	R	G	G	S	D	S	G	G	S	G	G	I	E	G	L	G	G	S	S	G	A	S	G	G	L	K	N	S	G	S	G	S	G	S	N	A	S	N	S	G	Q	G	S	S	G	G																																			
<b>Sp2 :</b>	S	G	G	S	N	R	G	G	S	D	S	G	G	S	G	G	I	E	G	L	G	G	S	S	G	A	S	G	G	L	K	N	S	G	S	G	S	G	S	N	A	S	N	S	G	Q	G	S	S	G	G																																			
<b>Sp2 :</b>	S	G	S	G	S	N	R	G	G	S	D	S	G	G	S	G	G	I	E	G	L	G	G	S	S	G	A	S	G	G	L	K	N	S	G	S	G	S	G	S	N	A	S	N	S	G	Q	G	S	S	G	G																																		
<b>VAMP2 (25-96) :</b>	N	L	T	S	N	R	L	Q	T	Q	A	V	D	E	V	V	D	I	M	R	V	N	V	D	K	V	L	E	R	D	Q	K	L	S	E	L	D	D	R	A	D	A	L	Q	A	G	A	S	Q	F	E	T	S	A	A	K	L	K	R	K	Y	W	W	K	N	L	K	M	M																	
<b>Vamp4 (46-117) :</b>	F	G	P	R	N	D	K	I	K	H	V	Q	N	V	D	E	V	I	D	M	Q	E	N	I	T	K	V	I	E	R	G	E	R	L	D	L	Q	D	K	S	E	S	L	S	D	N	A	T	A	F	S	N	R	S	K	Q	L	R	R	Q	M	W	W	R	G	S	K	I	K																	
<b>Snc2 (21-93) :</b>	N	P	N	S	Q	N	K	T	A	A	L	R	Q	E	I	D	D	T	V	G	I	M	R	D	N	I	N	K	V	A	E	R	G	E	R	L	T	S	I	E	D	K	A	D	N	L	A	I	S	A	Q	G	F	K	R	G	A	N	R	V	R	K	Q	M	W	W	K	D	L	K	M	R	M													
<b>Cter :</b>	G	S	G	G	S	G	S	G	L	N	D	I	F	E	A	Q	K	I	E	W	H	E																																																																