

Table S1 Tryptic peptides of *ApCatSper* 1-4, β , δ and γ identified by mass spectrometry.

Protein	Peptide sequence	XCorr	Probability	Sequence coverage [%]
<i>ApCatSper</i> 1	HLQGTGPVGAQDAALQKK	5.31	51.8	10.1
	RQTLVGPQDIILPSHLK	4.0	35.8	
	QTLVGPQDIILPSHLK	3.1	43.9	
	LLAAIEQNAHIMR	3.89	104.9	
	LLAAIEQNAHIM(ox)R	3.35	60.3	
<i>ApCatSper</i> 2	KSDDWEEKVVHDNLQMLVNSPSETVWPR	5.46	116.0	24.8
	SDDWEKVVHDNLQMLVNSPSETVWPR	4.35	85.4	
	VVHDNLQMLVNSPSETVWPR	5.22	106.9	
	YFQLMEALQENLQER	5.12	127.1	
	IIEDFHLESFDDHGHSDAPK	5.09	99.1	
	NGLEDPKMTSGIFDELAPLAEIFR	4.43	58.4	
	MTSGIFDELAPLAEIFR	4.11	115.1	
	VDLTYQDSFR	3.27	40.2	
	HGSSLTGLDGVK	3.18	89.5	
	QDLQNLTYHALLNIFDS	3.13	53.9	
	KTVGSSDALFR	3.07	28.4	
<i>ApCatSper</i> 3	WIRPDFEFHR	3.64	33.0	5.3
	MSSESLPSLTR	2.99	28.3	
<i>ApCatSper</i> 4	KGDILSNLLELEQR	4.92	129.7	16.4
	TDMTTQKPLHFGDFK	3.98	106.3	
	FQNYVLLSALEDNLAHEYQTIK	3.28	8.7	
	RNSSLSPSAQALIK	3.05	52.1	
	NSSLSPSAQALIK	2.77	31.6	
	LFTFDPSAVQR	2.91	30.1	
	QVENAGAAFRK	2.57	45.2	
	EVPITSVDDVMAK	2.54	51.2	
Predicted protein	Peptide sequence	XCorr	PEP ($\times 10^{-5}$)	Sequence coverage [%]
<i>ApCatSper</i> β	TFTFGADSWNVDLGHWK	3.99	53.03	11.4
	EVVSIVDPHREPIQLR	3.19	52.15	
	FLILSSKEDR	2.45	595.8	
	NTYTENVYPHLVIR	4.92	0.36	
	LHFVYDPLVT AEEFLHGSPK	4.91	0.054	
	RLHFVYDPLVT AEEFLHGSPK	4.74	0.26	
	SIQESSHPVDSAIT VEHIAATR	4.66	0.60	
	VAMATSQEASLHANMK	3.95	2.06	
<i>ApCatSper</i> δ	WSASLFPEDIGQTALR	3.42	0.026	12.9
	FAEFVWVWGR	1.80	1,286.0	
	DGADYLA ADEFIQELIPGISGDFAFVTTQGR	2.88	1,269.0	
	TSLLTGA AVGHLSR	3.69	0.037	
	TPQSWVEMLGR	2.97	3.98	
	LPYQVMNAGSNNR	2.03	55.93	
	ILQFPH	1.49	20,590.0	
<i>ApCatSper</i> γ	LRPSEGWDHMMR	3.49	2.41	9.1
	KLRPSEGWDHMMR	2.81	2,830.0	
	EGLDHRPIGESTTSTYIER	3.05	63.45	
	DPHGDP SWYDISLHSR	3.02	140	
	SLMAYQAIVHLLLER	2.77	31.42	
	YNRQDMFGAR	2.47	951.2	
	AIHFETPGK	2.37	1,073.0	
	ISNLHHR	2.38	2,636.0	
	EKYSLAAPQLTDGSLGHSEK	1.75	2,525.0	

XCorr, cross-correlation value; Probabilities and PEP (Posterior Error Probability) values were derived by mass spectrometric analysis of tryptic peptides by the Proteome Discoverer (PD) software version 1.2 and 1.4, respectively.