

Sequence	Subfamily	Residues/Motifs								
		110	113	134-136	181	185	187	296	302-306	310-312
<i>Bos taurus</i> rhodopsin	C-opsin	C	E	ERY	E	C	C	K	NPxxY	NKQ
<i>Octopus vulgaris</i> rhodopsin	R-opsin	C	R	DKY	E	C	C	K	NPxxY	HPK
Architeuthisdux_201604	Pseudopsin	C	Y	DKY	D	A	C	Q	NAAVY	NKI
Biomphalaria glabrata_157	Pseudopsin	C	Y	DKY	H	A	C	Q	HAAIY	NQI
Candidula unifasciata_225	Pseudopsin	C	Y	DKY	F	G	C	L	HAAIY	NPI
Candidula unifasciata_278	Pseudopsin	C	Y	DKY	H	G	C	L	HAAIY	NQI
Crassostrea virginica_878	Pseudopsin	C	Y	DKY	H	G	C	Q	NGAVY	NKI
Elysia chlorotica_1045	Pseudopsin	C	Y	DKY	H	G	C	L	HAAIY	NQI
Elysia marginata_1135	Pseudopsin	C	Y	DKY	H	G	C	L	HASIY	NQI
Gigantopeltaeegis_1215	Pseudopsin	C	Y	DKY	V	G	C	Q	NASIY	NKI
Lineus longissimus_618617	Pseudopsin	C	Y	DRY	D	G	C	T	NPLIY	NKQ
Mercenaria mercenaria_1853	Pseudopsin	C	Y	DKY	H	G	C	L	HSSVY	NKI
Mizuhopecten yessoensis_2164	Pseudopsin	C	Y	DKY	S	G	C	Q	NSAIY	NKI
Mytilus galloprovincialis_2322	Pseudopsin	C	Y	DKY	H	D	C	Q	NGAVY	NKI
Nautilus pompilius_786466	Pseudopsin	C	Y	DKY	H	A	C	Q	NAAVY	NKI
Octopus bimaculoides_2422	Pseudopsin	C	Y	DKY	D	A	C	Q	NAAVY	NKI
Octopus vulgaris_2483	Pseudopsin	C	Y	DKY	D	A	C	Q	NAAVY	NKI
Owenia fusiformis_2741	Pseudopsin	C	Y	DKY	H	T	C	Y	NAFAY	NRI
Pecten maximus_2863	Pseudopsin	C	Y	DKY	S	G	C	Q	NSAIY	NKI
Plakobranhus ocellatus_2988	Pseudopsin	C	Y	DKY	H	G	C	L	HATIY	NQI
Sepiopharaohis_3310	Pseudopsin	C	Y	DKY	H	A	C	Q	NAAVY	NKI

Supplementary Figure S1 - Residues and motifs comparison between opsins and pseudopsins.

Table showing the comparison of key residues and motifs between representative c-opsins, r-opsins and pseudopsins. Residues/Motifs numbers are referred with respect to *Bos taurus* rhodopsin. Sequences are reported with the species name and the numeric code corresponding to those in Suppl. File S5. Pale yellow indicates structural residues, pink the counterion sites, red the retinal binding site, and celestial the residues involved in the G-protein binding activation.