

## Supplementary material:

**Table 1:** Motifs<sup>®</sup> observed in the transmembrane helices and loop regions of human and *Drosophila* GPCR clusters<sup>+</sup>

Motifs in Single receptor type			Motifs in two different receptor types		
No	Motif	Receptor Type	No	Motif	Receptor Type
1	VGL(TM1) <sup>1</sup>	PR	17	AIA(TM3) <sup>2</sup>	PR,CMK
2	GNL(TM1) <sup>1</sup>	BGA	18	CIS(TM3) <sup>2</sup>	CMK,N&L
3	VMP(TM2) <sup>1</sup>	BGA	19	LPL(TM5) <sup>2</sup>	PR,CMK
4	YLLNLA(TM2) <sup>1</sup>	CMK	20	LYA(TM7) <sup>2</sup>	PR,CMK
5	TASI(TM3) <sup>1</sup>	BGA	<b>Motifs in multi-receptor type</b>		
6	LGF(TM5) <sup>1</sup>	PR	21	NLA(TM2) <sup>3</sup>	PR, CMK, BGA
7	PPF(TM6) <sup>1</sup>	BGA	22	ADLL(TM2) <sup>3</sup>	CMK,N&L,BGA
8	NSC(TM7) <sup>1</sup>	PR	23	CWLP(TM6) <sup>3</sup>	PR,CMK,BGA
9	WLGY(TM7) <sup>1</sup>	BGA	24	DLL(TM2) <sup>4</sup>	PR,CMK,N&L,BGA
10	HCC(TM7) <sup>1</sup>	CMK	<b>Motifs in Loop regions*</b>		
11	NPI(TM7) <sup>1</sup>	PR	27	MRTVTN(ICL1) <sup>1</sup>	PR
<b>Motifs in two different receptor types</b>			28	KLRN(ICL1) <sup>2</sup>	BGA,SEC
12	SLA(TM2) <sup>2</sup>	PR,BGA	29	LDR(ICL1) <sup>1</sup>	PR
13	IYL(TM2) <sup>2</sup>	CMK,N&L	30	<i>DRYLA(ICL2)<sup>1</sup></i>	<i>PR,CMK</i>
14	LFL(TM2) <sup>2</sup>	PR,CMK	31	<i>RYL(ICL2)<sup>3</sup></i>	<i>PR,CMK,N&amp;L</i>
15	TLP(TM2) <sup>2</sup>	PR,CMK	32	WPFGE(ECL1) <sup>1</sup>	PR
16	LPF(TM2) <sup>2</sup>	PR,CMK	33	LCK(ECL1) <sup>1</sup>	PR

@ The observed motifs were tabulated along with distribution of various receptor types of human and *Drosophila* GPCR clusters.

+ Topologies of observed motifs are given within brackets and number of occurrence is denoted in superscript with respect to the number of receptor types.

\* Motifs corresponding to the classic DRY motif are shown in *italics*.

Table S1, S2, S3, S4, S5, S6, S7 can be obtained from the URL:

[http://caps.ncbs.res.in/download/crossgenomeGPCRs/motif\\_supplementary.zip](http://caps.ncbs.res.in/download/crossgenomeGPCRs/motif_supplementary.zip)