

Supplementary table 1: Summary of the multiple comparison tests of the G protein activation assays (Figure 2A–C, Figure 3A–C).

Opsin–G	Reaction Time (min)	Statistical significance*			
		Light		Dark	
		G+	G–	G+	G–
OPNP–Gt	2	A	B	C	B
	4	A	B	C	B
OPN4-1–Gt	2	A	A	A	A
	4	A	A	A	A
	2 + 4	A	A,B	B	B
OPN4-2–Gt	2	A	A	B	B
	4	A	B	C	C
	2 + 4	A	B	C	C
OPNP–Gq	2	A	A	A	A
	4	A	A	A	A
	2 + 4	A	A	A	A
OPN4-1–Gq	2	A	B	A,B	B
	4	A	B	A,B	A,B
	2 + 4	A	B	B	B
OPN4-2–Gq	2	A	A	B	B
	4	A	A	B	B
	2 + 4	A	A	B	B

* A pair of the groups sharing no common letters (A, B, or C) is significantly different from each other. Significance level, 0.05.