

1 **Signaling mechanism for modulation by ATP of glycine receptors on rat retinal**
2 **ganglion cells**

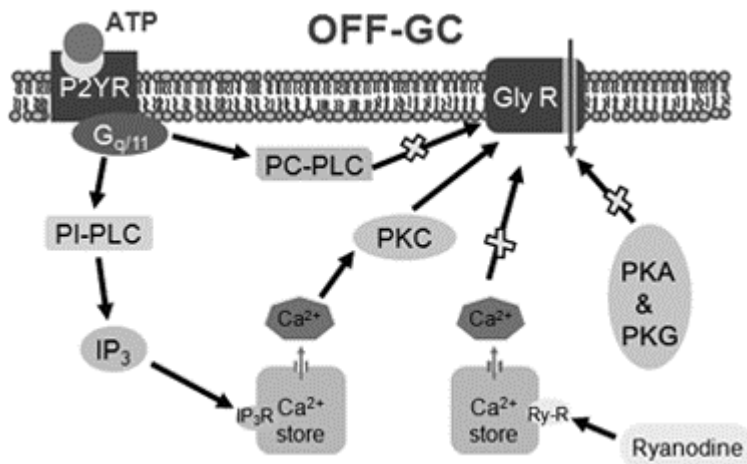
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10 **Fig. S1.**



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13 **Fig. S1. Schematic diagram showing the signaling pathway that mediates the**

14 **suppression by ATP of glycine currents in rat retinal OFF-GCs. By activating**

15 $G_{q/11}$ -coupled $P2Y_1$ and $P2Y_{11}$, ATP suppresses glycine currents via a distinct

16 intracellular PI-PLC/ IP_3 / Ca^{2+} /PKC signaling pathway. Note that cAMP-PKA and

17 cGMP-PKG signaling pathways are not involved in the effect. GlyR, glycine receptor;

18 IP_3 : inositol 1,4,5-trisphosphate; IP_3R : IP_3 receptor; OFF-GC: OFF type ganglion cell;

19 $P2YR$, $P2Y$ receptor; PC-PLC: phosphatidylcholine-specific phospholipase C;

20 PI-PLC: phosphatidylinositol-specific phospholipase C; PKA: protein kinase A; PKC:

21 protein kinase C; PKG: protein kinase G; Ry-R: ryanodine receptor.

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25 **Fig. S2.**

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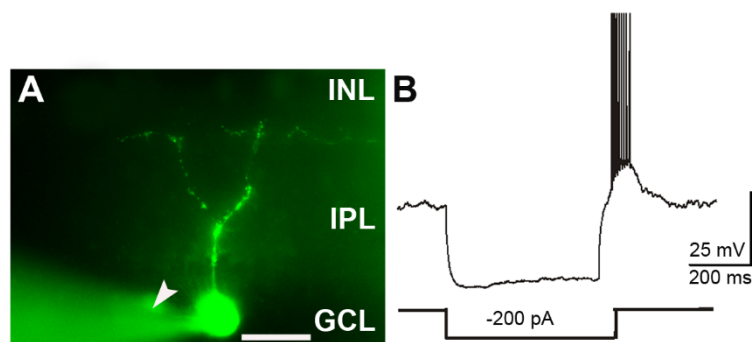
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33 **Fig. S2. A rat OFF type ganglion cell (OFF-GC).** (A) Fluorescence image of a
34 Lucifer yellow-filled OFF-GC, which possesses dendrite arborization in the distal part
35 of the IPL. The arrowhead points to the recording pipette. INL, inner nuclear layer;
36 IPL, inner plexiform layer; GCL, ganglion cell layer. Scale bar = 20 μm . (B) Voltage
37 response of the cell to a 500 ms negative current step. Note the rebound burst firing at
38 the offset of the current injection.

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