

## GPR158 Protein, Human (HEK293, GFP, FLAG, His)

Cat. No.:	HY-P701833
Synonyms:	GPR179; Probable G-protein coupled receptor 179; Probable G-protein coupled receptor 158-like 1; GPR158-like
Species:	Human
Source:	HEK293
Accession:	Q6PRD1 (M1-E775)
Gene ID:	440435
Molecular Weight:	

### PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of 20 mM HEPES pH 7.5, 200 mM NaCl, 1.5% glycerol, 5 mM EDTA, 0.01% (w/v) LMNG.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

### DESCRIPTION

Background	<p>GPR158 Protein, an orphan receptor integral to vision, plays a crucial role in signal transduction through retinal depolarizing bipolar cells. Functioning as an atypical G-protein coupled receptor, it recruits and regulates R7 group RGS-GNB5 complexes, diverging from conventional G protein activation. GPR158 promotes the GTPase activator activity of R7 RGS proteins, leading to the inactivation of G protein alpha subunits. This regulatory mechanism influences components of the metabotropic signaling cascade in retina ON-bipolar neurons, including TRPM1 and GRM6. GPR158 forms homodimers and associates with R7 group RGS-GNB5 complexes, thereby facilitating their membrane localization and modulating the GTPase activator activity of R7 RGS proteins. Interactions with TRPM1 and GRM6 suggest its involvement in controlling the GRM6 cascade's ability to gate TRPM1. Furthermore, GPR158 engages in a transsynaptic interaction with EGFLAM, emphasizing its role in synaptic organization of photoreceptor cells.</p>
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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