

GPR158 Polyclonal Antibody
Catalog # AP70172**Specification****GPR158 Polyclonal Antibody - Product Information**

Application	WB, IHC-P, IF
Primary Accession	Q5T848
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal

GPR158 Polyclonal Antibody - Additional Information**Gene ID** 57512**Other Names**

GPR158; KIAA1136; Probable G-protein coupled receptor 158

Dilution

WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/5000. Not yet tested in other applications.
IHC-P~~N/A
IF~~1:50~200

Format

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

Storage Conditions

-20°C

GPR158 Polyclonal Antibody - Protein Information**Name** GPR158 {ECO:0000303|Ref.1, ECO:0000312|HGNC:HGNC:23689}**Function**

Metabotropic receptor for glycine that controls synapse formation and function in the brain (PubMed:36996198). Acts as an atypical G-protein coupled receptor that recruits and regulates the RGS7-GNB5 complex instead of activating G proteins (PubMed:31189666, PubMed:36996198). In absence of glycine ligand, promotes the GTPase activator activity of RGS7, increasing the GTPase activity of G protein alpha subunits, thereby driving them into their inactive GDP-bound form (PubMed:36996198). Glycine-binding changes the conformation of the intracellular surface, inhibiting the GTPase activator activity of the RGS7-GNB5 complex, promoting G protein alpha subunits into their active GTP-bound form and regulating cAMP levels (PubMed:36996198). Also able to bind taurine, a compound closely related to glycine, but with a two- fold lower affinity (PubMed:36996198). Glycine receptor-dependent regulation of cAMP controls key ion channels, kinases and neurotrophic factors involved in neuronal excitability and synaptic transmission (PubMed:36996198). Plays a pivotal role in regulating mood and cognition via its ability to regulate neuronal excitability in L2/L3 pyramidal neurons of the prefrontal cortex (By similarity). Also involved in spatial learning by regulating hippocampal CA1 neuronal excitability (By similarity). Acts as a synaptic organizer in the hippocampus, required for proper mossy fiber-CA3 neurocircuitry establishment, structure and function: induces presynaptic differentiation in contacting axons via its interaction with GPC4 (By similarity). In addition to glycine, may also act as a receptor for osteocalcin (BGLAP) hormone: osteocalcin-binding initiates a signaling response that prevents neuronal apoptosis in the hippocampus and regulates the synthesis of neurotransmitters (By similarity).

Cellular Location

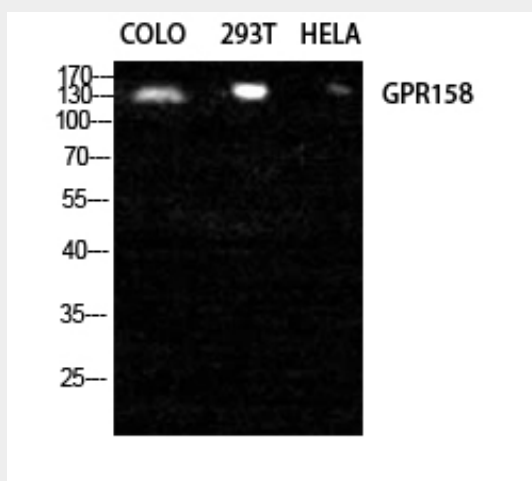
Cell membrane; Multi-pass membrane protein. Postsynaptic cell membrane {ECO:0000250|UniProtKB:Q8C419}; Multi-pass membrane protein. Presynaptic cell membrane {ECO:0000250|UniProtKB:Q8C419}; Multi-pass membrane protein Nucleus Note=Mainly localizes to the postsynaptic membrane, with a small portion to the presynaptic membrane (By similarity). Trafficks between the nucleus and the cell membrane; it is unclear how a multi-pass membrane protein can traffick between the nucleus and the cell membrane (PubMed:23451275). {ECO:0000250|UniProtKB:Q8C419, ECO:0000269|PubMed:23451275}

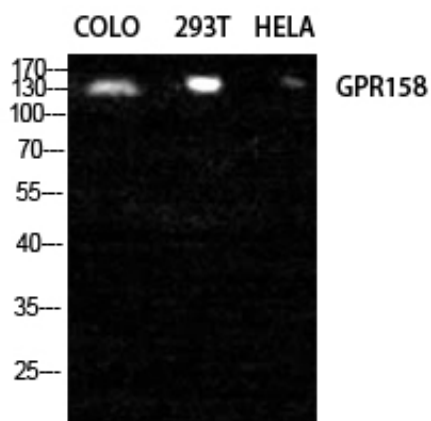
GPR158 Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

GPR158 Polyclonal Antibody - Images





GPR158 Polyclonal Antibody - Background

Orphan receptor.