Human GPR158 Antibody

Monoclonal Mouse IgG_1 Clone # 1027604

Catalog Number: MAB10286

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human GPR158 in direct ELISAs.
Source	Monoclonal Mouse IgG_1 Clone # 1027604
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Human embryonic kidney cell HEK293-derived human GPR158 protein Ala24-Gln411 Accession # Q5T848
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

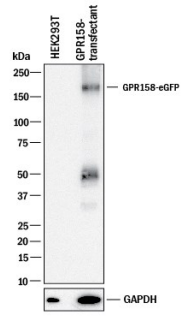
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	HEK293T human embryonic kidney cell line transfected with human GPR158
Flow Cytometry	0.25 µg/10^6 cells	HEK293 Human Cell Line Transfected with Human GPR158 and eGFP
Immunohistochemistry	5-25 µg/mL	Immersion fixed paraffin-embedded sections of human brain (cortex) tissue
Simple Western	25 µg/mL	HEK293T human embryonic kidney cell line transfected with GPR-158 and eGFP
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

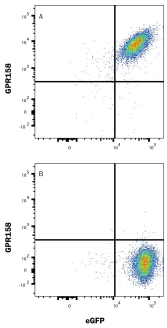
DATA

Western Blot



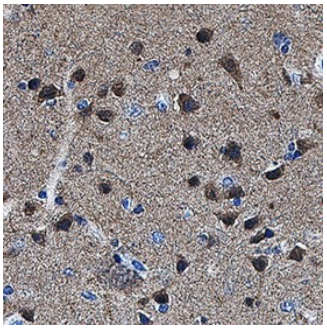
Detection of Human GPR158 by Western Blot. Western blot shows lysates of HEK293T human embryonic kidney cell line either mock transfected or transfected with human GPR158. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human GPR158 Monoclonal Antibody (Catalog # MAB10286) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for GPR158 at approximately 175 kDa (as indicated). GAPDH (Catalog # MAB5718) is shown as a loading control.This experiment was conducted under reducing conditions and using Western Blot Buffer Group 1.

Flow Cytometry



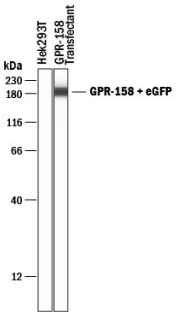
Detection of GPR158 in HEK293 Human Cell Line Transfected with Human GPR158 and eGFP by Flow Cytometry. HEK293 human embryonic kidney cell line transfected with (A) human GPR158 or (B) irrelevant protein, and eGFP was stained with Mouse Anti-Human GPR158 Monoclonal Antibody (Catalog # MAB10286) followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). Quadrant markers were set based on control antibody staining (Catalog # MAB002). Staining was performed using our Staining Membrane-associated Proteins protocol.

Immunohistochemistry



GPR158 in Human Brain Cortex Tissue. GPR158 was detected in immersion fixed paraffin-embedded sections of human brain (cortex) tissue using Mouse Anti-Human GPR158 Monoclonal Antibody (Catalog # MAB10286) at 5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in neurons. Staining was performed using our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

Simple Western



Detection of GPR158 by Simple Western™. Simple Western lane view shows lysates of HEK293T human embryonic kidney cell line either mock transfected or transfected with GPR-158 and eGFP, loaded at 0.2 mg/mL. A specific band was detected for GPR158 at approximately 191 kDa (as indicated) using 25 µg/mL of Mouse Anti-Human GPR158 Monoclonal Antibody (Catalog # MAB10286) . This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

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Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Human GPR158 Antibody

Monoclonal Mouse IgG_1 Clone # 1027604

Catalog Number: MAB10286

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

G-protein coupled receptor 158 (GPR158) is a receptor belonging to the Class C GPCR family. It lacks the extracellular Venus flytrap module characteristic of the known members of that family and instead contains two other elements that are not typical of the class: a calcium-binding EGF-like domain and a leucine repeat region (1, 2). The mature extracellular domain of human GPR158 contains 393 amino acids (aa) and shares 89% identity with both mouse and rat GPR158. GPR158 is expressed at the highest level in the brain, but also in a variety of other tissues including retina, spleen, liver and lung (3). GPR158 was originally identified in functional screens linked with biological stress and has been implicated in the osteocalcin effect on cognitive processes in the brain (4, 5), and glaucoma and cancer in the periphery (4, 6).

References:

1. Jingami, H. *et al.* (2003) Curr. Opin. Neurobiol. **13**:271.
2. Bjarnadóttir, T.K *et al.* (2005) Gene. **362**:70.
3. Orlandi, C. *et al.* (2012) J. Cell Biol. **197**:711.
4. Itakura, T. *et al.* (2019) J. Ocul. Pharmacol. Ther. **35**:203.
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6. Fenner, A. (2015) Nat. Rev. Urol. **12**:182.

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