

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human GPER in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human GPR144, GPR115, and GPR124 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human GPER Met1-Ser62 Accession # Q99527
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.

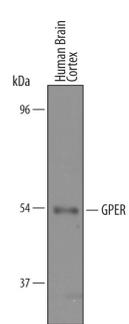
APPLICATIONS

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	See Below
Flow Cytometry	0.25 µg/10 ⁶ cells	See Below
Immunohistochemistry	5-15 µg/mL	See Below

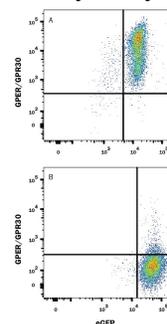
DATA

Western Blot



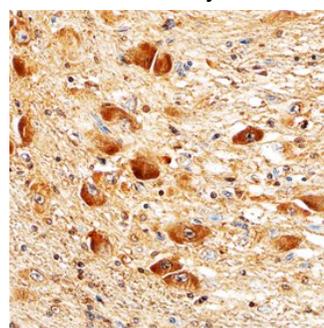
Detection of Human GPER by Western Blot. Western blot shows lysates of human brain cortex tissue. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human GPER Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5534) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for GPER at approximately 54 kDa (as indicated). This experiment was conducted under reducing conditions and using [Immunoblot Buffer Group 8](#).

Flow Cytometry



Detection of GPER/GPR30 in HEK293 Human Cell Line Transfected with human GPER/GRP30 and eGFP by Flow Cytometry. HEK293 human embryonic kidney cell line transfected with (A) human GPER/GRP30 or (B) irrelevant transfectants, and eGFP was stained with Goat Anti-Human GPER/GPR30 Affinity-Purified Polyclonal Antibody (Catalog # AF5534) followed by Allophycocyanin-conjugated Anti-Goat IgG Secondary Antibody (Catalog # F0108). Quadrants were set based on Goat IgG Flow Cytometry Isotype Control (Catalog # AB-108-C, data not shown). View our protocol for [Staining Membrane-associated Proteins](#).

Immunohistochemistry



GPER in Human Brain. GPER was detected in immersion fixed paraffin-embedded sections of human brain (hypothalamus) using Goat Anti-Human GPER Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5534) at 10 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to neuronal cell bodies. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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. <ul style="list-style-type: none"> ● 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

GPER (G-Protein Coupled Estrogen Receptor 1; also GPR30, DRY12 and mER) is a 44 kDa, seven transmembrane (TM) member of the GPR-1 family of molecules. It is ubiquitously expressed, appearing on/in neurons, monocytes and endothelial cells. Its exact location is unclear; it has been described in both the cell membrane and ER, but not by all investigators. Human GPER is 375 amino acids (aa) in length. It contains an N-terminal extracellular region (aa 1-62), a series of seven TM domains (aa 63-327), and a C-terminal cytoplasmic tail (aa 328-375). The initial function attributed to GPER was that of a membrane receptor for estrogen. This is in dispute. There are two potential splice variants for GPER. One shows a deletion of aa 32-49, while a second shows a 99 aa substitution for aa 308-375. Over aa 1-62, human GPER shares 57% aa identity with mouse GPER.