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GPER Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP14967b

Specification

GPER Antibody (C-term) Blocking Peptide - Product Information

Primary Accession Q99527

GPER Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 2852

Other Names
G-protein coupled estrogen receptor 1, Chemoattractant receptor-like 2, Flow-induced endothelial G-protein coupled receptor 1, FEG-1, G protein-coupled estrogen receptor 1, G-protein coupled receptor 30, GPCR-Br, IL8-related receptor DRY12, Lymphocyte-derived G-protein coupled receptor, LYGPR, Membrane estrogen receptor, mER, GPER1, CEPR, CMKRL2, DRY12, GPER, GPR30

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

GPER Antibody (C-term) Blocking Peptide - Protein Information

Name GPER1 (HGNC:4485)

Function
G-protein coupled estrogen receptor that binds to 17-beta- estradiol (E2) with high affinity, leading to rapid and transient activation of numerous intracellular signaling pathways. Stimulates cAMP production, calcium mobilization and tyrosine kinase Src inducing the release of heparin-bound epidermal growth factor (HB-EGF) and subsequent transactivation of the epidermal growth factor receptor (EGFR), activating downstream signaling pathways such as PI3K/Akt and ERK/MAPK. Mediates pleiotropic functions among others in the cardiovascular, endocrine, reproductive, immune and central nervous systems. Has a role in cardioprotection by reducing cardiac hypertrophy and perivascular fibrosis in a RAMP3-dependent manner. Regulates arterial blood pressure by stimulating vasodilation and reducing vascular smooth muscle and microvascular endothelial cell proliferation. Plays a role in blood glucose homeostasis contributing to the insulin secretion response by pancreatic beta cells. Triggers mitochondrial apoptosis during pachytene spermatocyte differentiation. Stimulates uterine epithelial cell proliferation. Enhances uterine contractility in response to oxytocin. Contributes to thymic atrophy by inducing apoptosis. Attenuates TNF-mediated endothelial expression of leukocyte adhesion molecules. Promotes neuritogenesis in developing hippocampal neurons. Plays a role in acute neuroprotection against

NMDA-induced excitotoxic neuronal death. Increases firing activity and intracellular calcium oscillations in luteinizing hormone-releasing hormone (LHRH) neurons. Inhibits early osteoblast proliferation at growth plate during skeletal development. Inhibits mature adipocyte differentiation and lipid accumulation. Involved in the recruitment of beta-arrestin 2 ARRB2 at the plasma membrane in epithelial cells. Functions also as a receptor for aldosterone mediating rapid regulation of vascular contractibility through the PI3K/ERK signaling pathway. Involved in cancer progression regulation. Stimulates cancer-associated fibroblast (CAF) proliferation by a rapid genomic response through the EGFR/ERK transduction pathway. Associated with EGFR, may act as a transcription factor activating growth regulatory genes (c-fos, cyclin D1). Promotes integrin alpha-5/beta-1 and fibronectin (FN) matrix assembly in breast cancer cells.

Cellular Location
Nucleus. Cytoplasm. Cytoplasm, perinuclear region. Cytoplasm, cytoskeleton. Cell membrane; Multi-pass membrane protein. Basolateral cell membrane; Multi-pass membrane protein. Cytoplasmic vesicle membrane; Multi-pass membrane protein Early endosome. Recycling endosome. Golgi apparatus membrane; Multi-pass membrane protein. Golgi apparatus, trans-Golgi network. Endoplasmic reticulum membrane; Multi-pass membrane protein. Cell projection, dendrite. Cell projection, dendritic spine membrane; Multi-pass membrane protein. Cell projection, axon. Postsynaptic density Mitochondrion membrane; Multi-pass membrane protein. Note=Colocalized with BSN to the active zone of presynaptic density. Colocalized with DLG4/PSD95 and neurabin-2 PPP1R9B in neuronal synaptosomes (By similarity). Endocytosed in a agonist- and arrestin-independent manner. Colocalized with RAMP3 and clathrin-coated pits at the plasma membrane. Colocalized with transferrin receptor at the plasma membrane and perinuclear region. Accumulated and colocalized with RAB11 proteins in recycling endosomes and trans-Golgi network (TGN), but does neither recycle back to the cell surface nor traffics to late endosome or lysosome. Colocalized with calnexin in the endoplasmic reticulum. Traffics to intracellular sites via cytokeratin intermediate filaments like KRT7 and KRT8 after constitutive endocytosis in epithelial cells. Colocalized with EGFR in the nucleus of agonist-induced cancer-associated fibroblasts (CAF).

Tissue Location
Expressed in placenta, endothelial and epithelial cells, non laboring and laboring term myometrium, fibroblasts and cancer-associated fibroblasts (CAF), prostate cancer cells and invasive adenocarcinoma (at protein level). Ubiquitously expressed, but is most abundant in placenta. In brain regions, expressed as a 2.8 kb transcript in basal forebrain, frontal cortex, thalamus, hippocampus, caudate and putamen.

GPER Antibody (C-term) Blocking Peptide - Protocols

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

- Blocking Peptides

GPER Antibody (C-term) Blocking Peptide - Images

GPER Antibody (C-term) Blocking Peptide - Background

This gene is a member of the G-protein coupled receptor 1family and encodes a multi-pass membrane protein that localizes tothe endoplasmic reticulum. The protein binds estrogen, resulting inintracellular calcium mobilization and synthesis ofphosphatidylinositol 3,4,5-trisphosphate in the nucleus. Thisprotein therefore plays a role in the rapid nongenomic signalingevents widely observed following stimulation of cells and tissueswith estrogen. Alternate transcriptional splice variants whichencode the same protein have been characterized. [provided byRefSeq].

GPER Antibody (C-term) Blocking Peptide - References

Patel, V.H., et al. Int. J. Mol. Med. 26(2):193-199(2010)Ignatov, A., et al. Breast Cancer Res. Treat.

123(1):87-96(2010)Li, Y., et al. Mol. Endocrinol. 24(5):969-980(2010)Kang, L., et al. Mol. Endocrinol. 24(4):709-721(2010)Ariazi, E.A., et al. Cancer Res. 70(3):1184-1194(2010)