

GPER1 / GPR30 Antibody (Cytoplasmic Domain)
Rabbit Polyclonal Antibody
Catalog # ALS10288**Specification**

GPER1 / GPR30 Antibody (Cytoplasmic Domain) - Product Information

Application	IHC-P
Primary Accession	O99527
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	42kDa KDa
Dilution	IHC-P~~N/A

GPER1 / GPR30 Antibody (Cytoplasmic Domain) - 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

Target/Specificity

Human GPR30. BLAST analysis of the peptide immunogen showed no homology with other human proteins.

Reconstitution & Storage

Long term: -70°C; Short term: +4°C

Precautions

GPER1 / GPR30 Antibody (Cytoplasmic Domain) is for research use only and not for use in diagnostic or therapeutic procedures.

GPER1 / GPR30 Antibody (Cytoplasmic Domain) - 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. Also functions as a receptor for aldosterone mediating rapid regulation of vascular contractility 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.

Volume

50 µl

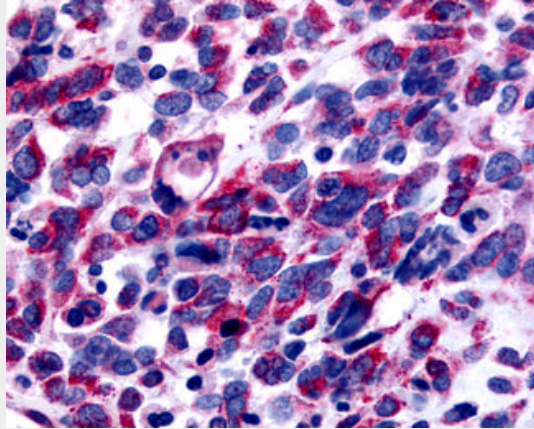
GPER1 / GPR30 Antibody (Cytoplasmic Domain) - Protocols

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

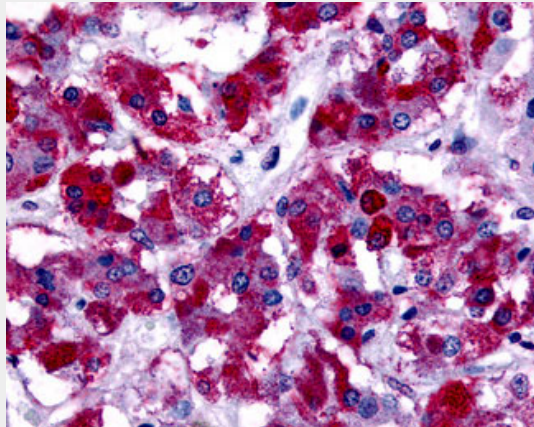
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)

- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

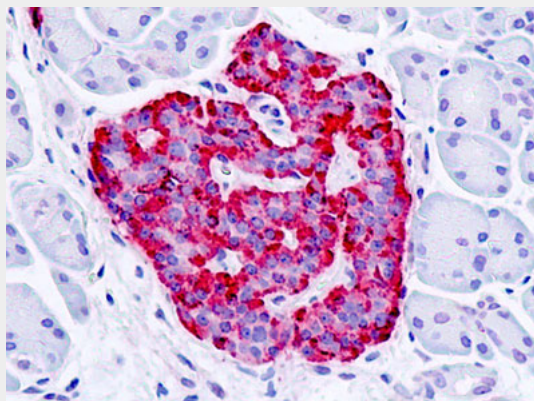
GPER1 / GPR30 Antibody (Cytoplasmic Domain) - Images



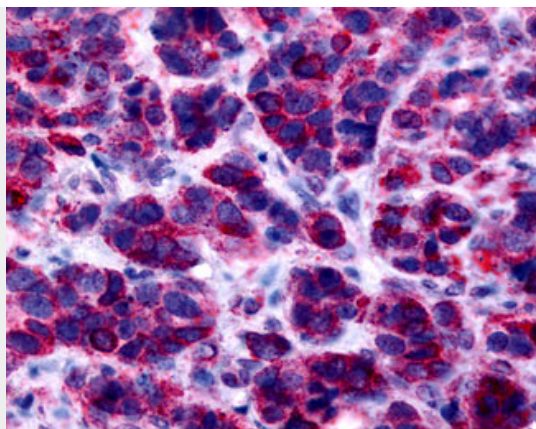
Anti-GPER1 / GPR30 antibody IHC of human Skin, Melanoma.



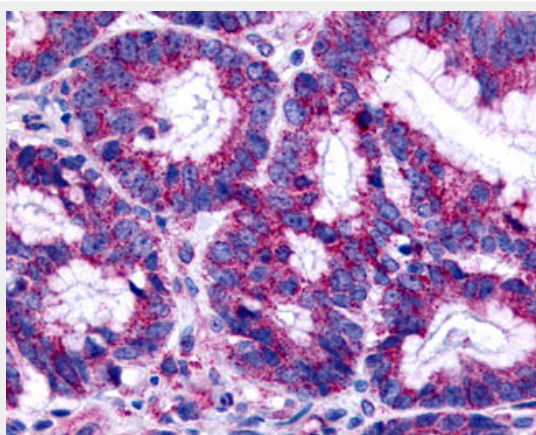
Anti-GPER1 / GPR30 antibody IHC of human adrenal.



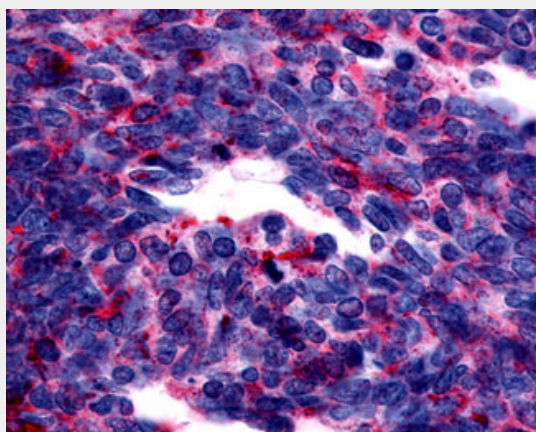
Human, Pancreas, Islet: Formalin-Fixed Paraffin-Embedded (FFPE)



Anti-GPER1 / GPR30 antibody IHC of human breast, carcinoma.



Anti-GPER1 / GPR30 antibody IHC of human colon, carcinoma.



Anti-GPER1 / GPR30 antibody IHC of human Lung, Small Cell Carcinoma.

GPER1 / GPR30 Antibody (Cytoplasmic Domain) - Background

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.

GPER1 / GPR30 Antibody (Cytoplasmic Domain) - References

- Owman C.S.O., et al. *Biochem. Biophys. Res. Commun.* 228:285-292(1996).
Feng Y., et al. *Biochem. Biophys. Res. Commun.* 231:651-654(1997).
Takada Y., et al. *Biochem. Biophys. Res. Commun.* 240:737-741(1997).
Kvingedal A.M., et al. *FEBS Lett.* 407:59-62(1997).
Carmeci C., et al. *Genomics* 45:607-617(1997).