

Anti-G-Protein Coupled Receptor 30 Antibody

Catalog # ABO11545

Product Information

Application	WB
Primary Accession	Q99527
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for G-protein coupled estrogen receptor 1(GPER1) detection. Tested with WB in Human;Mouse;Rat.

Reconstitution Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

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
Calculated MW	42248
Application Details	Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat
Subcellular Localization	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 . Cell junction, synapse, postsynaptic cell membrane, postsynaptic density . Mitochondrion membrane ; Multi-pass membrane protein . 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 Specificity	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. .
Source	Eukaryota
Protein Name	G-protein coupled estrogen receptor 1
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg Thimerosal, 0.05mg NaN ₃ .
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human G-protein coupled receptor 30(275-288aa ENVFISVHLLQRTQ), different from the related mouse sequence by one amino acid, and from the related rat sequence by two amino acids.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20° C for one year. After r° Constitution, at 4° C for one month. It° Can also be aliquotted and stored frozen at -20° C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the G-protein coupled receptor 1 family.

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 neurogenesis 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

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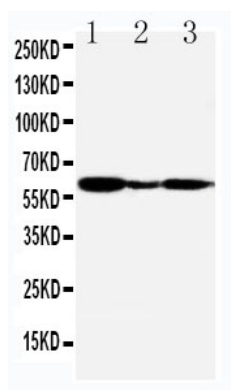
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Background

G-protein coupled estrogen receptor 1(GPER1), also known as the GPR30 or CEPR is a G protein-coupled receptor that in humans is encoded by the GPER gene. This gene is a member of the G-protein coupled receptor 1 family and encodes a multi-pass membrane protein that localizes to the endoplasmic reticulum. It is mapped to 7p22.3. The protein binds estrogen, resulting in intracellular calcium mobilization and synthesis of phosphatidylinositol 3,4,5-trisphosphate in the nucleus. This protein therefore plays a role in the rapid nongenomic signaling events widely observed following stimulation of cells and tissues with estrogen. Alternate transcriptional splice variants which encode the same protein have been characterized.

Images

Anti-G-protein coupled receptor 30 antibody, ABO11545,
Western blotting Lane 1: COLO320 Cell Lysate Lane 2:
MCF-7 Cell Lysate Lane 3: COS7 Cell Lysate



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