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GPR3 Antibody
Catalog # ASC10910

Specification

GPR3 Antibody - Product Information

Application	**IF**
Primary Accession	P46089
Other Accession	P46089, 2827
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Application Notes	**GPR3 antibody can be used for detection of GPR3 by Western blot at 1 - 2 µg/mL. Antibody can also be used for immunohistochemistry starting at 2.5 µg/mL. For immunofluorescence start at 20 µg/mL.**

GPR3 Antibody - Additional Information

Gene ID **2827**

Target/Specificity
GPR3 antibody was raised against a 13 amino acid synthetic peptide from near the carboxy terminus of human GPR3.

The immunogen is located within the last 50 amino acids of GPR3.

Reconstitution & Storage
GPR3 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Precautions
GPR3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

GPR3 Antibody - Protein Information

Name GPR3

Synonyms ACCA

Function
Constitutively active G-protein coupled receptor that maintains high 3'-5'-cyclic adenosine monophosphate (cAMP) levels that a plays a role in serveral processes including meiotic arrest in oocytes or neuronal development via activation of numerous intracellular signaling pathways. Acts as an essential activator of thermogenic adipocytes and drives thermogenesis via its intrinsic G(s)-coupling activity without the requirement of a ligand (PubMed:34048700). Has a

potential role in modulating a number of brain functions, including behavioral responses to stress (By similarity), amyloid-beta peptide generation in neurons (By similarity). Stimulates neurite outgrowth in cerebellar granular neurons modulated via PKA, ERK, and most strongly PI3K-mediated signaling pathways (By similarity).

Cellular Location
Cell membrane; Multi-pass membrane protein.

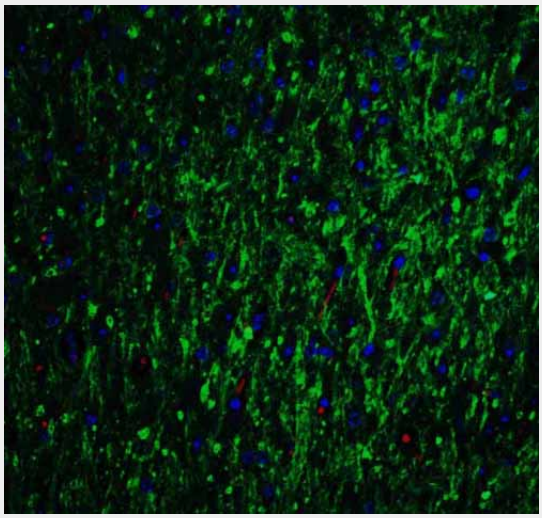
Tissue Location
Expressed predominantly in the central nervous system, and at low levels in the lung, kidney, testis, ovary and eye Highly expressed in regions of the brain implicated in the Alzheimer disease

GPR3 Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

GPR3 Antibody - Images



Immunofluorescence of GLS2 in mouse brain tissue with GLS2 Antibodyat 20 µg/mL.

GPR3 Antibody - Background

GPR3 Antibody: GPR3, also known as ACCA, is a G-protein coupled receptor that constitutively activates adenylate cyclase and is highly expressed in the central nervous system. Overexpression of GPR3 stimulates the production of amyloid-beta peptide (Abeta), the deposition of which is one of the pathological hallmarks of Alzheimer 's disease (AD), while the ablation of GPR3 prevented the accumulation of Abeta in vitro and in an AD mouse model. This is of particular interest because of the proximity of a reported candidate Alzheimer 's disease (AD) locus, suggesting that GPR3 may be a potential therapeutic target for the treatment of AD. GPR3 has also been shown to block the

proliferation of cerebellar granule cell precursors (GCP) during postnatal development by inhibiting the Shh-induced proliferation of GCP, indicating that GPR3 activation may represent one of the signals that triggers the postnatal cell cycle exit and terminal differentiation of GPCs.

GPR3 Antibody - References

Marchesse A, Docherty JM, Nguyen T, et al. Cloning of human genes encoding novel G protein-coupled receptors. Genomics1994; 23:609-18.
Eggerickx D, Denef JF, Labbe O, et al. Molecular cloning of an orphan G-protein-coupled receptor that constitutively activates adenylate cyclase. Biochem. J.1995; 309:837-43.
Thathiah A, Spittaels K, Hoffmann M, et al. The orphan G protein-coupled receptor 3 modulates amyloid-beta peptide generation in neurons. Science2009; 323:946-951.
Blacker D, Bertram L, Saunder AJ, et al. Results of a high-resolution genome screen of 437 Alzheimer's disease families. Hum. Mol. Genet.2003; 12:23-32.