10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

GPR68 Antibody - middle region

Rabbit Polyclonal Antibody
Catalog # AI15103

Product Information

Application	WB
Primary Accession	Q15743
Other Accession	NM_003485, NP_003476
Reactivity	Human, Mouse, Rat, Rabbit, Pig, Dog, Horse
Predicted	Human, Mouse, Rat, Rabbit, Pig, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	41077

Additional Information

Gene ID	8111
Alias Symbol	MGC111379, MGC156983, OGR1, GPR12A
Other Names	Ovarian cancer G-protein coupled receptor 1, OGR-1, G-protein coupled receptor 68, GPR12A, Sphingosylphosphorylcholine receptor, GPR68, OGR1
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-GPR68 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	GPR68 Antibody - middle region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GPR68 {ECO:0000303|PubMed:27693231, ECO:0000312|HGNC:HGNC:4519}
Function	Proton-sensing G-protein coupled receptor activated by extracellular pH, which is required to monitor pH changes and generate adaptive reactions (PubMed:12955148, PubMed:29677517, PubMed:32865988, PubMed:33478938, PubMed:39753132, PubMed:40215959, PubMed:40215960). The receptor is almost silent at pH 7.8 but fully activated at pH 6.8 (PubMed:12955148, PubMed:39753132). Ligand binding causes a conformation change that triggers signaling via guanine nucleotide- binding proteins (G proteins) and modulates the activity of downstream effectors, such as phospholipase C (PubMed:29677517, PubMed:39753132). GPR68 is mainly coupled to G(q) G proteins and mediates production of diacylglycerol

(DAG) and inositol 1,4,5-trisphosphate (IP3) (PubMed:29677517, PubMed:39753132). Acts as a key mechanosensor of fluid shear stress and membrane stretch (PubMed:29677517, PubMed:30471999). Expressed in endothelial cells of small-diameter resistance arteries, where it mediates flow-induced dilation in response to shear stress (PubMed:29677517). May represents an osteoblastic pH sensor regulating cell-mediated responses to acidosis in bone (By similarity). Acts as a regulator of calcium-sensing receptor CASR in a seesaw manner: GPR68-mediated signaling inhibits CASR signaling in response to protons, while CASR inhibits GPR68 in presence of extracellular calcium (By similarity).

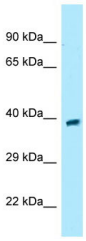
Cellular Location Cell membrane; Multi-pass membrane protein

Tissue Location Found at low level in a wide range of tissues, but significantly expressed in lung, kidney, bone and nervous system

References

An S.,et al.FEBS Lett. 375:121-124(1995).
Xu Y.,et al.Genomics 35:397-402(1996).
Kaighin V.A.,et al.Submitted (JUL-2008) to the EMBL/GenBank/DDBJ databases.
King M.M.,et al.Submitted (APR-2004) to the EMBL/GenBank/DDBJ databases.
Heilig R.,et al.Nature 421:601-607(2003).

Images



WB Suggested Anti-GPR68 Antibody Titration: 1.0 µg/ml
Positive Control: Fetal Brain