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Anti-GPR68 / OGR1 Antibody (Extracellular Domain)

Rabbit Anti Human Polyclonal Antibody
Catalog # ALS17540

Product Information

Application	IHC-P
Primary Accession	Q15743
Predicted	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	41077
Concentration (mg/ml)	1 mg/ml

Additional Information

Gene ID	8111
Alias Symbol	GPR68
Other Names	GPR68, Brgrb, G protein-coupled receptor 68, G-protein coupled receptor 68, OGR1, Brgr1, GPR12A, OGR-1
Target/Specificity	Human GPR68. BLAST analysis of the peptide immunogen showed no homology with other human proteins.
Reconstitution & Storage	Immunoaffinity purified
Precautions	Anti-GPR68 / OGR1 Antibody (Extracellular Domain) 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