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Anti-GPR68 Antibody

Catalog # AP53850

Product Information

Application	WB, IF
Primary Accession	Q15743
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	41077

Additional Information

Gene ID	8111
Other Names	OGR1; Ovarian cancer G-protein coupled receptor 1; OGR-1; G-protein coupled receptor 68; GPR12A; Sphingosylphosphorylcholine receptor
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human GPR68. The exact sequence is proprietary.
Dilution	WB~~1/500 - 1/1000 IF~~1/50 - 1/200
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

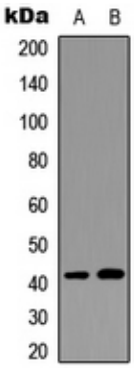
Name	GPR68 {ECO:0000303|PubMed:27693231, ECO:0000312|HGNC:HGNC:4519}
Function	Proton-sensing G-protein coupled receptor activated by extracellular pH, which is required to monitor pH changes and generate adaptive reactions (PubMed:12955148, PubMed:29677517, PubMed:32865988, PubMed:33478938, PubMed:39753132). 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

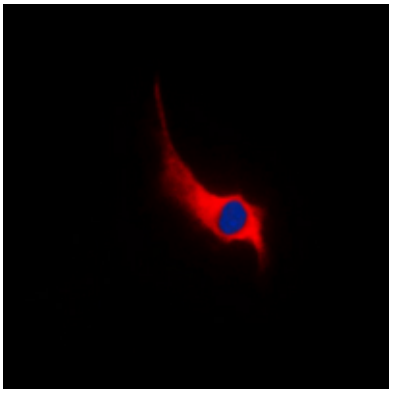
Background

Rabbit polyclonal antibody to GPR68

Images



Western blot analysis of GPR68 expression in HeLa (A), mouse spleen (B) whole cell lysates.



Immunofluorescent analysis of GPR68 staining in Hela cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).