

Product datasheet for **TA328635**

GRPR Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IF, IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3000
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)RSYHYSEVDTSMHLH, corresponding to amino acid residues 287-300 of human BB2. 3rd extracellular loop.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: Phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.025% NaN ₃ .
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	gastrin releasing peptide receptor
Database Link:	NP_005305 Entrez Gene 14829 Mouse Entrez Gene 24938 Rat Entrez Gene 2925 Human P30550



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Background:

Bombesin receptor 2 (BB2) is a member of a family of receptors that binds the 14 amino acid peptide, bombesin. Bombesin was first isolated from frog skin and it was later established that mammals express endogenous bombesin-like peptides such as gastrin-releasing peptide (GRP; a 27 amino acid homologue) and neuromedin B (NMB; a 10 amino acid homologue). BB2 is the preferred receptor for GRP and hence it is also referred to as GRP receptor or GRP-R. BB1 is the preferred receptor for NMB and therefore it is also known as NMB-R. A third member (called BB3) of the bombesin receptor family has been recognized but the endogenous mammalian ligand for this receptor remains to be identified. All three bombesin receptors are members of the seven-transmembrane domain, G protein-coupled receptor (GPCR) superfamily. BB2 is coupled to a Gq/11 protein that activates phospholipase C (PLC) and leads to production of inositol 1,4,5-trisphosphate (InsP3), intracellular Ca²⁺ mobilization, and cell growth. GRP (through its binding to BB2) plays an essential role in the release of hormones in the intestinal tract, the regulation of smooth muscle contraction, and the secretion of pancreatic enzymes. In the brain, BB2 has been implicated in regulating feeding behavior, thermoregulation, and memory formation. Finally, BB2 is overexpressed in several human tumors including breast, prostate, and lung, where it acts as a growth factor receptor inducing tumor growth. BB2 is considered a potential target for the development of both diagnostics and anti-cancer therapies. Alomone labs is pleased to offer a highly specific antibody directed against an epitope located in the 3rd extracellular loop of the human BB2 receptor. Anti-Bombesin Receptor 2 (extracellular) antibody (#ABR-002) can be used in western blot analysis, as well as immunocytochemical and immunohistochemical applications, and will recognize BB2 from human, rat, mouse, and dog samples.

Synonyms:

BB2; BB2R

Note:

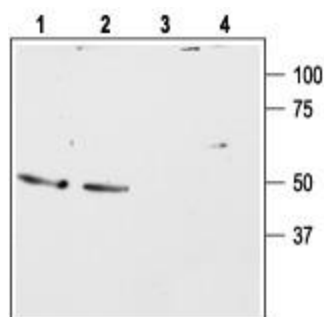
This antibody was tested in live cell imaging. Please see IF/ICC data for detail.

Protein Families:

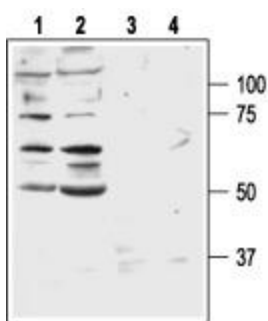
Druggable Genome, GPCR, Transmembrane

Protein Pathways:

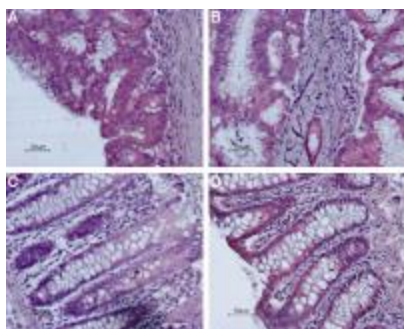
Calcium signaling pathway, Neuroactive ligand-receptor interaction

Product images:

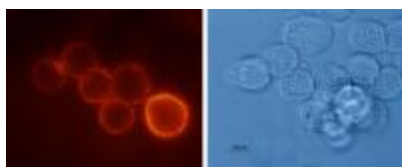
Western blot analysis of rat (lanes 1 and 3) and mouse (lanes 2 and 4) brain lysates: 1, 2. Anti-Bombesin Receptor 2 (extracellular) antibody, (1:500). 3, 4. Anti-Bombesin Receptor 2 (extracellular) antibody, preincubated with the control peptide antigen.



Western blot analysis of human DU-145 (lanes 1 and 3) and PC-3 (lanes 2 and 4) prostate carcinoma cell lines: 1, 2. Anti-Bombesin Receptor 2 (extracellular) antibody, (1:200). 3, 4. Anti-Bombesin Receptor 2 (extracellular) antibody, preincubated with the control peptide antigen.



Expression of Bombesin Receptor 2 in human colon. Immunohistochemical staining of paraffin-embedded human colon using Anti-Bombesin Receptor 2 (extracellular) antibody, (1:50). (A and B) Human colon showing malignant growth. Staining is specific for epithelium-derived malignant cells. (C and D) Normal colon, staining is specific for absorptive epithelial cells in the crypts of Lieberkuhn. Histofine (pink) is used for the color reaction. Hematoxylin is used as the counterstain.



Expression of Bombesin Receptor 2 in human HT-29 cells. Immunocytochemical staining of live intact human HT-29 (colorectal adenocarcinoma) cells. Cells were stained with Anti-Bombesin Receptor 2 (extracellular) antibody (1:100), followed by goat-anti-rabbit-AlexaFluor-555 secondary antibody, showing surface expression of the BB2 receptor.