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Product datasheet for TA328625

NMBR 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)KSAHNLPGEYNEHTKK, corresponding to amino acid residues 241-256 of human BB1.3rd intracellular 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% NaN3.
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:	neuromedin B receptor
Database Link:	NP_002502 Entrez Gene 18101 MouseEntrez Gene 25264 RatEntrez Gene 4829 Human P28336

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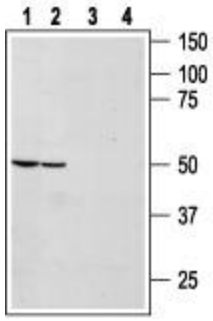
Background: Bombesin receptor 1 (BB1) is a member of a family of receptors that binds the 14 amino acid peptide bombesin. Bombesin was initially isolated from frog skin and it was later established that mammals express endogenous bombesin-like peptides such as gastrin-releasing peptide (GRP) and neuromedin B (NMB), 27 and 10 amino acid homologues, respectively. BB1 is the preferred receptor for NMB (therefore it is also known as NMB receptor) while BB2 is the preferred receptor for GRP. BB3 was the third member of the bombesin family of receptors to be cloned based upon its sequence similarity to BB1 and BB2. The affinity of BB3 for bombesin is lower than that of the BB1 and BB2 receptors, as are its affinities for NMB and GRP. This suggests that the endogenous mammalian ligand for the BB3 receptor remains to be identified. All three bombesin receptors are members of the 7-transmembrane domain, G protein-coupled receptor (GPCR) superfamily. BB1 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. BB1 is expressed in the brain where it likely mediates the inhibition of food intake and regulates the stress and fear response. BB1 and its ligand NMB are expressed in the pituitary where they participate in the regulation of thyroid-stimulating hormone (TSH) secretion in both autocrine and paracrine fashions.In the periphery, BB1 is expressed in the gastrointestinal and urogenital smooth muscle but its physiological function in these tissues is unclear. Finally, BB1 is over-expressed in several human tumors especially colon and non-small lung cancer where it acts as a growth factor receptor inducing tumor growth. BB1 is considered a potential target for the development of both diagnostics and anti-cancer therapies.

Synonyms: BB1; BB1R; NMB-R

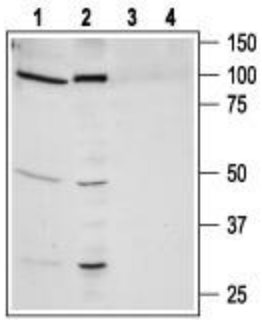
Protein Families: Druggable Genome, GPCR, Transmembrane

Protein Pathways: Neuroactive ligand-receptor interaction

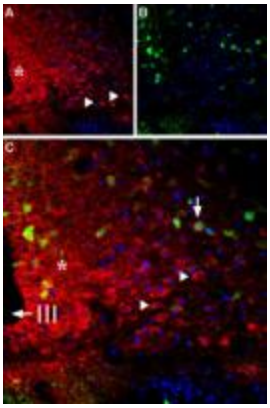
Product images:



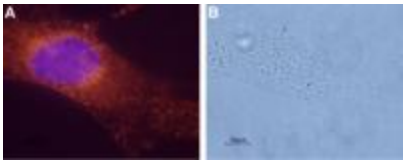
Western blot analysis of rat (lanes 1 and 3) and mouse (lanes 2 and 4) brain lysates: 1, 2. Anti-Bombesin Receptor 1 antibody, (1:1000). 3, 4. Anti-Bombesin Receptor 1 antibody, preincubated with the control peptide antigen.



Western blot analysis of human lung carcinoma NCI-H526 (lanes 1 and 3) and human prostate carcinoma PC-3 (lanes 2 and 4) cell line lysates: 1, 2. Anti-Bombesin Receptor 1 antibody, (1:1000). 3, 4. Anti-Bombesin Receptor 1 antibody, preincubated with the control peptide antigen.



Expression of Bombesin Receptor 1 in rat hypothalamus. Immunohistochemical staining of frozen rat hypothalamus sections using Anti-Bombesin Receptor 1 antibody, (1:200). A. Staining (red) appears in the neuropil near the ventricle (asterisk) and in neurons (triangles). Calbindin D28k staining (green) appears in neurons. Merge of (A) and (B) shows co-expression of Bombesin Receptor 1 and Calbindin in a few neurons (vertical arrow). DAPI is used as the counterstain.



Expression of Bombesin Receptor 1 in a human breast cancer cell line. Immunocytochemical staining of paraformaldehyde-fixed and permeabilized mammary gland adenocarcinoma MDA-MB-231. A. Cells were stained with Anti-Bombesin Receptor 1 antibody, (1:1000), followed by goat anti-rabbit-AlexaFluor-555 secondary antibody (red). Hoechst 33342 (blue) is used to visulaize the nuclei. B. Live view of the same field as in (A).