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GRP Rabbit pAb

Catalog # AP99067

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q8R1I2
Other Accession	Q8R1I2
Reactivity	Rat
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	15659
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from mouse Gastrin Releasing Peptide
Epitope Specificity	24-52/146
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	ngs to the bombesin/neuromedin-B/ranatensin family.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene encodes a member of the bombesin-like family of gastrin-releasing peptides. The encoded preproprotein is proteolytically processed to generate two peptides, gastrin-releasing peptide and neuromedin-C. These peptides regulate numerous functions of the gastrointestinal and central nervous systems, including release of gastrointestinal hormones, smooth muscle cell contraction, and epithelial cell proliferation. These peptides are also likely to play a role in human cancers of the lung, colon, stomach, pancreas, breast, and prostate. Alternative splicing results in multiple transcript variants, at least one of which encodes a preproprotein that is proteolytically processed. [provided by RefSeq, Jan 2016].

Additional Information

Gene ID	225642
Other Names	BN; GRP-10; preproGRP; proGRP; BLP; GRP_HUMAN; GRP; GRP_MOUSE; GRP_PIG; GRP_RAT;
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	Grp
Function	Stimulates the release of gastrin and other gastrointestinal hormones (By similarity). Contributes to the perception of prurient stimuli and to the transmission of itch signals in the spinal cord that promote scratching behavior (PubMed:17653196, PubMed:26658875, PubMed:28280205). Contributes primarily to nonhistaminergic itch sensation (PubMed:28280205). In one study, shown to act in the amygdala as part of an inhibitory network which inhibits memory specifically related to learned fear (PubMed:12526815). In another study, shown to act on vasoactive intestinal peptide (VIP)-expressing cells in the auditory cortex, most likely via extrasynaptic diffusion from local and long-range sources, to mediate disinhibition of glutamatergic cells via VIP cell-specific GRPR signaling which leads to enhanced auditory fear memories (PubMed:34610277). Contributes to the regulation of food intake (PubMed:12176666). Inhibits voltage-gated sodium channels but enhances voltage-gated potassium channels in hippocampal neurons (By similarity). Contributes to the induction of sighing by acting directly on the pre-Botzinger complex, a cluster of several thousand neurons in the ventrolateral medulla responsible for inspiration during respiratory activity (PubMed:26855425).
Cellular Location	Secreted {ECO:0000250|UniProtKB:P07492}. Cytoplasmic vesicle, secretory vesicle lumen {ECO:0000250|UniProtKB:Q863C3}. Cell projection, neuron projection. Note=In neurons of the retrotrapezoid nucleus/parafacial respiratory group, expressed on neuron projections which project into the pre-Botzinger complex
Tissue Location	Detected in peptidergic dorsal root ganglion neurons (at protein level) (PubMed:17653196). Expressed in several dozen neurons throughout the dorsal retrotrapezoid nucleus/parafacial respiratory group (RTN/pFRG) as well as in scattered cells in the nucleus tractus solitarius and parabrachial nucleus (at protein level) (PubMed:26855425). Within the RTN/pFRG, expressed in neuronal subpopulations distinct from those expressing Nmb (at protein level) (PubMed:26855425). Expressed in L6 corticothalamic neurons (at protein level) (PubMed:34610277). Strongly expressed in several input areas of the auditory cortex including the lateral amygdala, contralateral auditory cortex, temporal association area, perirhinal cortex and auditory thalamic nuclei (at protein level) (PubMed:34610277). Detected in the suprachiasmatic nucleus in the hypothalamus (PubMed:28280205) Detected in a subset of glutamatergic cells in the cortex (PubMed:34610277). Highly expressed both in the lateral nucleus of the amygdala, and in regions sending synaptic projections to the lateral nucleus (PubMed:12526815).

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