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NPSR1 Rabbit pAb

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Catalog # AP54498

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	Q6W5P4
Predicted	Human, Mouse, Rat, Dog, Pig, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	42687
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human NPSR1
Epitope Specificity	201-300/371
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cell Membrane and Cytoplasmic
SIMILARITY	Belongs to the G-protein coupled receptor 1 family. Vasopressin/oxytocin receptor subfamily.
DISEASE	Defects in NPSR1 are a cause of asthma-related traits type 2 (ASRT2) [MIM:608584]. Asthma-related traits include clinical symptoms of asthma, such as coughing, wheezing, dyspnea, bronchial hyperresponsiveness as assessed by methacholine challenge test, serum IgE levels, atopy and atopic dermatitis.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	G protein-coupled receptors (GPRs), also known as seven transmembrane receptors, heptahelical receptors or 7TM receptors, comprise a superfamily of proteins that play a role in many different stimulus-response pathways. G protein coupled receptors translate extracellular signals into intracellular signals (G protein activation) and they respond to a variety of signaling molecules, such as hormones and neurotransmitters. GPR154 (G-protein coupled receptor 154), also known as NPSR1 (neuropeptide S receptor), GPRA (G-protein coupled receptor for asthma susceptibility) or PGR14, is a 371 amino acid protein that is thought to play a role in autocrine or paracrine signaling pathways. Ubiquitously expressed, GPR154 exists as nine alternatively spliced isoforms. Defects in the gene encoding GPR154 is the cause of asthma-related traits type 2 (ASRT2).

Additional Information

Gene ID	387129
Other Names	Neuropeptide S receptor, G-protein coupled receptor 154, G-protein coupled receptor PGR14, G-protein coupled receptor for asthma susceptibility, NPSR1,

	GPR154, GPRA, PGR14
Target/Specificity	Ubiquitous. Isoform 1 is predominantly expressed in smooth muscle. Isoform 4 is predominantly expressed in epithelial cells. In bronchial biopsies, it is expressed in smooth muscle cells of asthma patients, but not in control patients; whereas in epithelial cells, its expression is consistently stronger in asthma patients.
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000
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	NPSR1
Function	G-protein coupled receptor for neuropeptide S (NPS) (PubMed: 15947423, PubMed:16720571, PubMed:16790440). Receptor activation by NPS initiates a G(q)/GNAQ-dependent phospholipase C- activating signaling pathway, resulting in Ca(2+) mobilization from intracellular stores and increased intracellular Ca(2+) levels (PubMed:15312648, PubMed:15947423, PubMed:16720571, PubMed:16790440, PubMed:25714705, PubMed:26865629). In addition to this pathway, NPS binding to its receptor activates cAMP/PKA signal transduction (PubMed:26865629). Finally, both pathways converge to activate ERK1/ERK2 phosphorylation and signaling cascade (PubMed:26865629). Inhibits cell growth in response to NPS binding (PubMed:15947423).
Cellular Location	[Isoform 1]: Cell membrane; Multi-pass membrane protein [Isoform 4]: Cell membrane; Multi-pass membrane protein [Isoform 5]: Cytoplasm [Isoform 7]: Cytoplasm
Tissue Location	Isoform 4 is ubiquitous; it is detected in glandular epithelia of bronchus, stomach, small intestine, colon, uterus, esophagus, spleen, kidney, pancreas, prostate and breast Isoform 1 is detected in uterus, colon and prostate, and in the smooth muscle cell layer in bronchial and arterial walls (at protein level) (PubMed:15947423). Isoform 1 is predominantly expressed in smooth muscle. Isoform 4 is predominantly expressed in epithelial cells. In bronchial biopsies, it is expressed in smooth muscle cells of asthma patients, but not in control patients; whereas in epithelial cells, its expression is consistently stronger in asthma patients

Background

G protein-coupled receptors (GPRs), also known as seven transmembrane receptors, heptahelical receptors or 7TM receptors, comprise a superfamily of proteins that play a role in many different stimulus-response pathways. G protein coupled receptors translate extracellular signals into intracellular signals (G protein activation) and they respond to a variety of signaling molecules, such as hormones and neurotransmitters. GPR154 (G-protein coupled receptor 154), also known as NPSR1 (neuropeptide S receptor), GPRA (G-protein coupled receptor for asthma susceptibility) or PGR14, is a 371 amino acid protein that is thought to play a role in autocrine or paracrine signaling pathways. Ubiquitously expressed, GPR154 exists as nine alternatively spliced isoforms. Defects in the gene encoding GPR154 is the cause of asthma-related traits type 2 (ASRT2).