

NPSR1 Rabbit pAb

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Product Information

Application WB, IHC-P, IHC-F, IF, E

Primary Accession Q6W5P4

Reactivity Rat, Pig, Mouse, Dog, Horse

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

Synonyms GPR154, GPRA, PGR14

Function G-protein coupled receptor for neuropeptide S (NPS) (PubMed: <u>16790440</u>).

Promotes mobilization of intracellular Ca(2+) stores (PubMed: 16790440). Inhibits cell growth in response to NPS binding (PubMed: 15947423). Involved

in pathogenesis of asthma and other IgE- mediated diseases.

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).

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