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Anti-TACR1 Picoband Antibody

Catalog # ABO12135

Product Information

Application	WB
Primary Accession	P25103
Host	Rabbit
Reactivity	Human, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Substance-P receptor(TACR1) detection. Tested with WB in Human;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	6869
Other Names	Substance-P receptor, SPR, NK-1 receptor, NK-1R, Tachykinin receptor 1, TACR1, NK1R, TAC1R
Calculated MW	46251
Application Details	Western blot, 0.1-0.5 □g/ml, Human, Rat
Subcellular Localization	Cell membrane; Multi-pass membrane protein.
Source	Eukaryota
Protein Name	Substance-P receptor
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human TACR1 (264-291aa FHIFFLLPYINPDLYLKKFIQQVYLAIM), different from the related mouse sequence by one amino acid, and from the related rat sequence by two amino acids.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the G-protein coupled receptor 1 family.

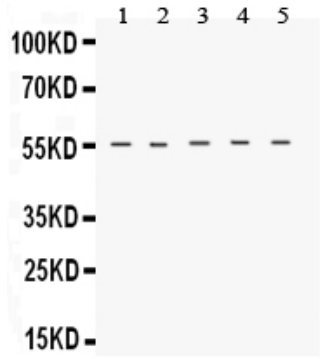
Protein Information

Name	TACR1
Synonyms	NK1R, TAC1R
Function	Receptor for the tachykinin substance P, also able to bind and respond to tachynins neurokinin A/substance K and neurokinin B/neuromedin-K (PubMed:1718267, PubMed:15452552). The rank order of affinity of this receptor to tachykinins is: substance P > neurokinin A/substance K > neurokinin B/neuromedin-K (PubMed:1718267). Substance P binding to its receptor triggers G protein-coupled receptor signaling via activation of phosphatidylinositol hydrolysis by phospholipase C. Substance P binding also triggers signaling via activation of adenylate cyclase activity which results in increased intracellular levels of cyclic AMP (cAMP) (By similarity).
Cellular Location	Cell membrane; Multi-pass membrane protein. Early endosome {ECO:0000250|UniProtKB:P14600}. Note=After signaling cascade initiation, substance P binding results in receptor internalization and localization to early endosomes, followed by receptor recycling to the cell surface. {ECO:0000250|UniProtKB:P14600}

Background

The tachykinin receptor 1 (TACR1), also known as neurokinin 1 receptor (NK1R) or substance P receptor (SPR), is a G protein coupled receptor found in the central nervous system and peripheral nervous system. The endogenous ligand for this receptor is Substance P, although it has some affinity for other tachykinins. The protein is the product of the TACR1 gene. Tachykinin receptor 1 consists of 407 amino acid residues, and it has a molecular weight of 58.000. Tachykinin receptor 1, as well as the other tachykinin receptors, is made of seven hydrophobic transmembrane (TM) domains with three extracellular and three intracellular loops, an amino-terminus and a cytoplasmic carboxy-terminus. The loops have functional sites, including two cysteines amino acids for a disulfide bridge, Asp-Arg-Tyr, which is responsible for association with arrestin and, Lys/Arg-Lys/Arg-X-X-Lys/Arg, which interacts with G-proteins.The tachykinin receptor 1 can be found in both the central and peripheral nervous system. It is present in neurons, brainstem, vascular endothelial cells, muscle, gastrointestinal tracts, genitourinary tract, pulmonary tissue, thyroid gland and different types of immune cells. The binding of SP to the tachykinin receptor 1 has been associated with the transmission of stress signals and pain, the contraction of smooth muscles and inflammation. Tachykinin receptor 1 antagonists have also been studied in migraine, emesis and psychiatric disorders. In fact, aprepitant has been proved effective in a number of pathophysiological models of anxiety and depression. Other diseases in which the tachykinin receptor 1 system is involved include asthma, rheumatoid arthritis and gastrointestinal disorders.

Images



Anti- TACR1 Picoband antibody, ABO12135, Western blottingAll lanes: Anti TACR1 (ABO12135) at 0.5ug/mlLane 1: Human Placenta Tissue Lysate at 50ugLane 2: Rat Lung Tissue Lysate at 50ugLane 3: Rat Brain Tissue Lysate at 50ugLane 4: U87 Whole Cell Lysate at 40ugLane 5: A431 Whole Cell Lysate at 40ugPredicted bind size: 46KDObserved bind size: 55KD

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.