

# Anti-TACR1 Picoband Antibody

Catalog # ABO12135

## Product Information

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|--------------------------|-----------------------------------------------------------------------------------------------------------|
| <b>Application</b>       | WB                                                                                                        |
| <b>Primary Accession</b> | <a href="#">P25103</a>                                                                                    |
| <b>Host</b>              | Rabbit                                                                                                    |
| <b>Reactivity</b>        | Human, Rat                                                                                                |
| <b>Clonality</b>         | Polyclonal                                                                                                |
| <b>Format</b>            | Lyophilized                                                                                               |
| <b>Description</b>       | Rabbit IgG polyclonal antibody for Substance-P receptor(TACR1) detection.<br>Tested with WB in Human;Rat. |

**Reconstitution** Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

## Additional Information

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| <b>Gene ID</b>                  | 6869                                                                                                                                                                                                                                          |
| <b>Other Names</b>              | Substance-P receptor, SPR, NK-1 receptor, NK-1R, Tachykinin receptor 1, TACR1, NK1R, TAC1R                                                                                                                                                    |
| <b>Calculated MW</b>            | 46251                                                                                                                                                                                                                                         |
| <b>Application Details</b>      | Western blot, 0.1-0.5 µg/ml, Human, Rat                                                                                                                                                                                                       |
| <b>Subcellular Localization</b> | Cell membrane; Multi-pass membrane protein.                                                                                                                                                                                                   |
| <b>Source</b>                   | Eukaryota                                                                                                                                                                                                                                     |
| <b>Protein Name</b>             | Substance-P receptor                                                                                                                                                                                                                          |
| <b>Contents</b>                 | Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.                                                                                                                                                                           |
| <b>Immunogen</b>                | 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. |
| <b>Purification</b>             | Immunogen affinity purified.                                                                                                                                                                                                                  |
| <b>Cross Reactivity</b>         | No cross reactivity with other proteins                                                                                                                                                                                                       |
| <b>Storage</b>                  | At -20° C for one year. After reconstitution, 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.                                                             |
| <b>Sequence Similarities</b>    | Belongs to the G-protein coupled receptor 1 family.                                                                                                                                                                                           |

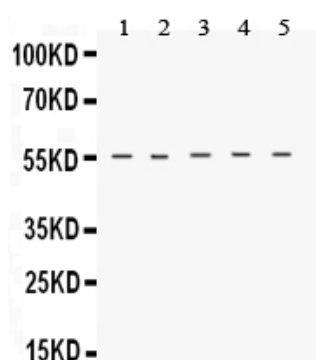
## Protein Information

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| 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: <a href="#">1718267</a> , PubMed: <a href="#">15452552</a> ). The rank order of affinity of this receptor to tachykinins is: substance P > neurokinin A/substance K > neurokinin B/neuromedin-K (PubMed: <a href="#">1718267</a> ). 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 blotting All lanes: Anti TACR1 (ABO12135) at 0.5ug/ml Lane 1: Human Placenta Tissue Lysate at 50ug Lane 2: Rat Lung Tissue Lysate at 50ug Lane 3: Rat Brain Tissue Lysate at 50ug Lane 4: U87 Whole Cell Lysate at 40ug Lane 5: A431 Whole Cell Lysate at 40ug Predicted bind size: 46KD Observed bind size: 55KD

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