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Product datasheet for TA329063

Tacr1 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	FC, IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3,000; FC: 1:50-1:600
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide CMIEWPEHPNRTYEK, corresponding to amino acid residues 180-194 of rat Neurokinin Receptor 1 (NK1) (Accession P14600). 2nd extracellular loop.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: Phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN3.
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	tachykinin receptor 1
Database Link:	NP_036799 Entrez Gene 6869 HumanEntrez Gene 21336 MouseEntrez Gene 24807 Rat P14600

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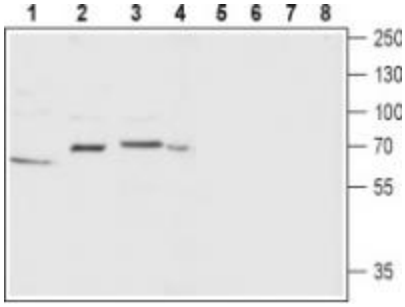
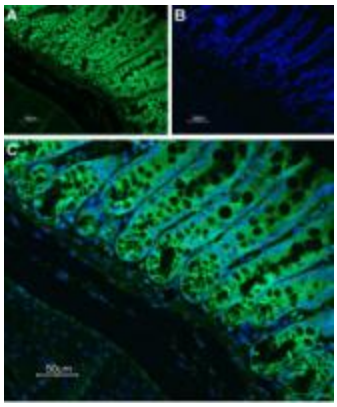
Background: Substance P (SP), Neurokinin A (NKA) and Neurokinin B (NKB) are all peptides belonging to the Tachykinin protein family. These three peptides which demonstrate a quite heterogeneity in their distribution exert their effect via three receptors: Neurokinin 1-3 receptors, members of the G-protein coupled receptor superfamily. However, Neurokinin 1 Receptor (NK1) preferentially binds Substance P, Neurokinin 2 Receptor (NK2) to NKA and Neurokinin 3 Receptor (NK3) to NKB. Neurokinin receptors are distinguished by their seven transmembrane domains, an extracellular N-terminus and a cytosolic C-terminal. An unusual property of these receptors is the presence of introns as part of their structural organization. Tachykinin receptors undergo alternative splicing. For example, NK1 is detected with different C-terminal lengths. The longer receptor isoform is found in the brain whereas the truncated form is mostly detected in the periphery. Due to the broad expression profile of tachykinin peptides, their respective receptors are also expressed in a similar fashion. NK1 is widely expressed in neurons endothelial cells, muscle and immune system cells. NK2 is broadly expressed in the periphery and its expression in the brain is quite restricted. NK3 on the other hand is largely expressed in the central nervous system and is also detected in the uterus, skeletal muscle, lung and liver. Neurokinin receptors have been found in many pathophysiological indications and have therefore become targets for the development of pharmacological compounds. Such indications include cancer, psychological disorders, migraine and various inflammations, just to name a few.

Synonyms: NK-1R; NK1R; NKIR; SPR; TAC1R

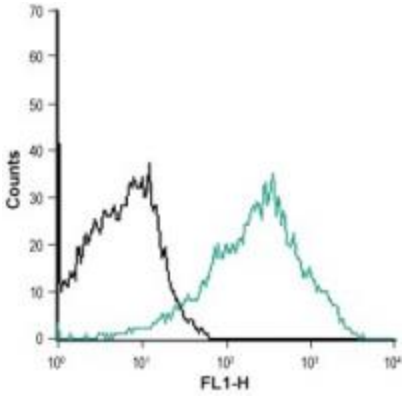
Product images:



Western blot analysis of rat ovary (lanes 1 and 5), rat brain (lanes 2 and 6), mouse brain membrane (lanes 3 and 7) and SH-SY5Y (lanes 4 and 8) lysate: 1-4. Anti-Neurokinin Receptor 1 (NK1) (extracellular) antibody, (1:200). 5-8. Anti-Neurokinin Receptor 1 (NK1) (extracellular) antibody, preincubated with the control peptide antigen.



Expression of Neurokinin Receptor 1 in rat colon. Immunohistochemical staining of rat colon paraffin-embedded section using Anti-Neurokinin Receptor 1 (NK1) (extracellular) antibody, (1:100) followed by goat anti-rabbit-AlexaFluor-488 secondary antibody. A. NK1 labeling appears in the tubular glands of the mucosa layer. Note that the smooth muscle and lamina propria do not stain. B. Nuclear staining using DAPI as the counterstain. C. Merged images of A and B.



Indirect flow cytometry analysis of MEG-O1 living cells: — Unstained cells. — Cells + Anti-Anti-Neurokinin Receptor 1 (NK1) (extracellular) antibody, (5-10 µg/1x106 cells).