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TAAR1 / TA1 Antibody (Cytoplasmic Domain)
Rabbit Polyclonal Antibody
Catalog # ALS10499

Specification

TAAR1 / TA1 Antibody (Cytoplasmic Domain) - Product Information

Application	**WB, IHC-P**
Primary Accession	Q96RJ0
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**39kDa KDa**
Dilution	**WB~~1:1000** **IHC-P~~N/A**

TAAR1 / TA1 Antibody (Cytoplasmic Domain) - Additional Information

Gene ID 134864

Other Names
Trace amine-associated receptor 1, TaR-1, Trace amine receptor 1, TAAR1, TA1, TAR1, TRAR1

Target/Specificity
Human TAAR1. BLAST analysis of the peptide immunogen showed no homology with other human proteins.

Reconstitution & Storage
Long term: -70°C; Short term: +4°C

Precautions
TAAR1 / TA1 Antibody (Cytoplasmic Domain) is for research use only and not for use in diagnostic or therapeutic procedures.

TAAR1 / TA1 Antibody (Cytoplasmic Domain) - Protein Information

Name TAAR1 {ECO:0000303|PubMed:15718104, ECO:0000312|HGNC:HGNC:17734}

Function
Intracellular G-protein coupled receptor for trace amines, which recognizes endogenous amine-containing metabolites such as beta- phenylethylamine (beta-PEA), 3-iodothyronamine (T1AM), isoamylamine (IAA), cadaverine (CAD), cyclohexylamine (CHA), p-tyramine (p-TYR), trimethylamine (TMA), octopamine and tryptamine (PubMed:11459929, PubMed:11723224, PubMed:15718104, PubMed:31399635, PubMed:36100653, PubMed:37935376, PubMed:<a

href="http://www.uniprot.org/citations/37935377" target="_blank">37935377, PubMed:37963465, PubMed:38168118). Also functions as a receptor for various drugs and psychoactive substances, such as amphetamine and methamphetamine (PubMed:31399635, PubMed:37935376, PubMed:37935377). Unresponsive to classical biogenic amines, such as epinephrine and histamine and only partially activated by dopamine and serotonin (PubMed:11459929, PubMed:11723224). Expressed in both the central and peripheral nervous system: TAAR1 activation regulates the activity of several neurotransmitter signaling pathways by (1) decreasing the basal firing rates of the neurons involved and by (2) lowering the sensitivity of receptors to neurotransmitters (PubMed:37935376, PubMed:37935377, PubMed:37963465, PubMed:38168118). Ligand binding causes a conformation change that triggers signaling via guanine nucleotide-binding proteins (G proteins) and modulates the activity of downstream effectors (PubMed:31399635, PubMed:37935376, PubMed:37963465). TAAR1 is coupled with different G(i)/G(o)-, G(s)- or G(q)/G(11) classes of G alpha proteins depending on the ligand (PubMed:31399635, PubMed:37935376, PubMed:37963465). CAD-binding is coupled to G(i)/G(o) G alpha proteins and mediates inhibition of adenylate cyclase activity (PubMed:37935376, PubMed:37963465). T1AM- or beta-PEA-binding is coupled to G(s) G alpha proteins and mediates activation of adenylate cyclase activity (PubMed:37935376, PubMed:37963465). CHA- or IAA-binding is coupled to G(q)/G(11) G alpha proteins and activates phospholipase C-beta, releasing diacylglycerol (DAG) and inositol 1,4,5-trisphosphate (IP3) second messengers (PubMed:37935376, PubMed:37963465). TMA-binding is coupled with all three G(i)/G(o)-, G(s)- or G(q)/G(11) G alpha protein subtypes (PubMed:37935376, PubMed:37963465). Amphetamine-binding is coupled with G(s)- or G(12)/G(13) G alpha protein subtypes (PubMed:31399635).

Cellular Location
Endomembrane system. Endoplasmic reticulum membrane; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein Note=Localizes mainly intracellularly (PubMed:11723224, PubMed:31399635, PubMed:36100653). Partially colocalizes with the endoplasmic reticulum; also found at lower lever at the plasma membrane (PubMed:36100653).

Tissue Location
Expressed at low level in both the central and peripheral nervous system (PubMed:11459929). Moderately expressed in stomach (PubMed:11459929). Low levels in amygdala, kidney, and lung, and small intestine (PubMed:11459929). Trace amounts in cerebellum, dorsal root ganglia, hippocampus, hypothalamus, liver, medulla, pancreas, pituitary, pontine reticular formation, prostate, skeletal muscle and spleen (PubMed:11459929).

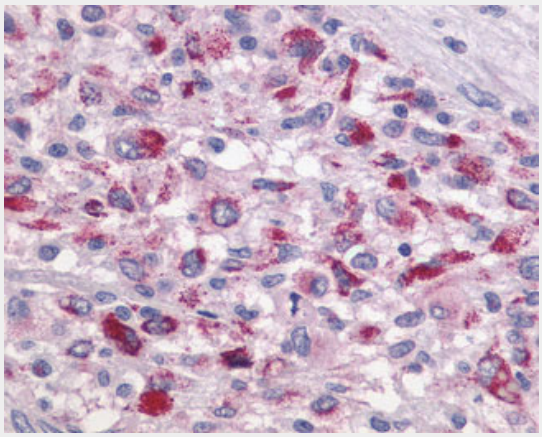
Volume
50 µl

TAAR1 / TA1 Antibody (Cytoplasmic Domain) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

TAAR1 / TA1 Antibody (Cytoplasmic Domain) - Images



Anti-TAAR1 / TA1 antibody IHC of human Brain, Glioblastoma.

TAAR1 / TA1 Antibody (Cytoplasmic Domain) - Background

Receptor for trace amines, including beta- phenylethylamine (b-PEA), p-tyramine (p-TYR), octopamine and tryptamine, with highest affinity for b-PEA and p-TYR. Unresponsive to classical biogenic amines, such as epinephrine and histamine and only partially activated by dopamine and serotonine. Trace amines are biogenic amines present in very low levels in mammalian tissues. Although some trace amines have clearly defined roles as neurotransmitters in invertebrates, the extent to which they function as true neurotransmitters in vertebrates has remained speculative. Trace amines are likely to be involved in a variety of physiological functions that have yet to be fully understood. The signal transduced by this receptor is mediated by the G(s)-class of G-proteins which activate adenylate cyclase.

TAAR1 / TA1 Antibody (Cytoplasmic Domain) - References

Borowsky B.,et al.Proc. Natl. Acad. Sci. U.S.A. 98:8966-8971(2001).
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Mungall A.J.,et al.Nature 425:805-811(2003).
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