

TAAR1 (E-12): sc-50184

BACKGROUND

Trace amines are endogenous molecules structurally related to classical biogenic amines that are linked to psychiatric conditions. A family of G-protein coupled receptors referred to as trace-amine-associated receptors (TAAR) are activated by trace amines and are present in very low levels in mammalian tissue. TAARs contain several structural features that are similar to the rhodopsin β -adrenergic receptor superfamily, including the positions of the seven transmembrane regions that provide common ligand-binding pockets as well as the short N- and C-terminal domains. TAAR proteins are potential targets for drugs of abuse, such as amphetamine and MDMA, as well as neuropsychiatric disorders including schizophrenia, depression, and attention deficit disorder. TAAR-1 is a 340 amino acid protein that increases intracellular cAMP accumulation in response to β -phenylethylamine and tyramine. TAAR-1 is associated with the detection of social cues, illustrating its significance as a therapeutic target.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604849. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609333. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Aridon, P., D'Andrea, G., Rigamonti, A., Leone, M., Casari, G. and Bussone, G. 2004. Elusive amines and cluster headache: mutational analysis of trace amine receptor cluster on chromosome 6q23. *Neurol. Sci.* 3: 279-280.
4. Lindemann, L., Ebeling, M., Kratochwil, N.A., Bunzow, J.R., Grandy, D.K. and Hoener, M.C. 2005. Trace amine-associated receptors form structurally and functionally distinct subfamilies of novel G protein-coupled receptors. *Genomics* 85: 372-385.
5. Miller, G.M., Verrico, C.D., Jassen, A., Konar, M., Yang, H., Panas, H., Bahn, M., Johnson, R. and Madras, B.K. 2005. Primate trace amine receptor 1 modulation by the dopamine transporter. *J. Pharmacol. Exp. Ther.* 313: 983-994.
6. Liberles, S.D. and Buck, L.B. 2006. A second class of chemosensory receptors in the olfactory epithelium. *Nature* 442: 645-650.
7. Wainscott D.B., Little, S.P., Yin, T., Tu, Y., Rocco, V.P., He, J.X. and Nelson, D.L. 2006. Pharmacologic characterization of the cloned human trace amine-associated receptor1 (TAAR1) and evidence for species differences with the rat TAAR1. *J. Pharmacol. Exp. Ther.* 320: 475-485.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

CHROMOSOMAL LOCATION

Genetic locus: TAAR1 (human) mapping to 6q23.2.

SOURCE

TAAR1 (E-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of TAAR1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-50184 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TAAR1 (E-12) is recommended for detection of TAAR1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TAAR1 (E-12) is also recommended for detection of TAAR1 in additional species, including bovine and porcine.

Suitable for use as control antibody for TAAR1 siRNA (h): sc-61646, TAAR1 shRNA Plasmid (h): sc-61646-SH and TAAR1 shRNA (h) Lentiviral Particles: sc-61646-V.

Molecular Weight of TAAR1: 39.1 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.