SANTA CRUZ BIOTECHNOLOGY, INC.

TaR (D-7): sc-398096

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, (TaRs or TAARs) are activated by trace amines and are present in very low levels in mammalian tissue. TaRs 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. TaRs are associated with the detection of social cues, illustrating their significance as therapeutic targets. Specifically, TaR 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.

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. Aridon, P., et al. 2004. Elusive amines and cluster headache: mutational analysis of trace amine receptor cluster on chromosome 6q23. Neurol. Sci. 25: S279-S280.
3. Lindemann, L., et al. 2005. Trace amine-associated receptors form structurally and functionally distinct subfamilies of novel G protein-coupled receptors. Genomics 85: 372-385.
4. Miller, G.M., et al. 2005. Primate trace amine receptor 1 modulation by the dopamine transporter. J. Pharmacol. Exp. Ther. 313: 983-994.
5. Liberles, S.D. and Buck, L.B. 2006. A second class of chemosensory receptors in the olfactory epithelium. Nature 442: 645-650.
6. Wainscott, D.B., et al. 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.

CHROMOSOMAL LOCATION

Genetic locus: Taar1 (mouse) mapping to 10 A4.

SOURCE

TaR (D-7) is a mouse monoclonal antibody raised against amino acids 181-247 mapping near the C-terminus of TaR-1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

TaR (D-7) is recommended for detection of TaR-1 of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for TaR siRNA (m): sc-61645, TaR shRNA Plasmid (m): sc-61645-SH and TaR shRNA (m) Lentiviral Particles: sc-61645-V.

Molecular Weight (predicted) of TaR: 39 kDa.

Molecular Weight (observed) of TaR: 33 kDa.

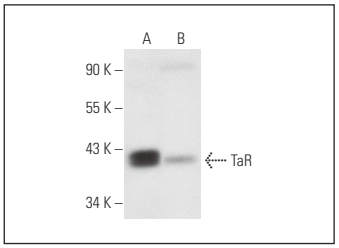
Molecular Weight of glycosylated TaR: 42 kDa.

Positive Controls: Neuro-2A whole cell lysate: sc-364185 or C6 whole cell lysate: sc-364373.

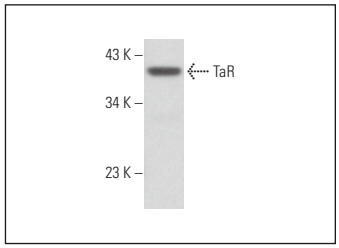
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



TaR (D-7): sc-398096. Western blot analysis of TaR expression in Neuro-2A (**A**) and C6 (**B**) whole cell lysates.



TaR (D-7): sc-398096. Western blot analysis of TaR expression in Neuro-2A whole cell lysate. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

SELECT PRODUCT CITATIONS

1. Gemechu, J.M., et al. 2018. Characterization of dopaminergic system in the striatum of young adult Park2$^{-/-}$ knockout rats. Sci. Rep. 8: 1517.

RESEARCH USE

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