SANTA CRUZ BIOTECHNOLOGY, INC.

OR5AU1 (F-10): sc-398756

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Olfactory receptors interact with odorant molecules in the nose to initiate a neuronal response that leads to the perception of smell. While they share a seven transmembrane domain structure with many neurotransmitter and hormone receptors, olfactory receptors are responsible for the recognition and transduction of odorant signals. The olfactory receptor gene family is the largest in the genome. OR5AU1 (olfactory receptor 5AU1), also known as OR14-38, is a 362 amino acid multi-pass membrane protein that belongs to the G protein-coupled receptor 1 family. The gene that encodes OR5AU1 consists of more than 900 bases and maps to human chromosome 14q11.2. Housing over 700 genes, chromosome 14 comprises nearly 3.5% of the human genome. Chromosome 14 encodes the presinilin 1 (PSEN1) gene, which is one of the three key genes associated with the development of Alzheimer's disease (AD). The SERPINA1 gene is also located on chromosome 14 and, when defective, leads to the genetic disorder α1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

REFERENCES

1. Zech, L., et al. 1984. Inversion of chromosome 14 marks human T-cell chronic lymphocytic leukaemia. Nature 308: 858-860.
2. Aisenberg, A.C., et al. 1985. Rearrangement of the gene for the β chain of the T-cell receptor in T-cell chronic lymphocytic leukemia and related disorders. N. Engl. J. Med. 313: 529-533.

CHROMOSOMAL LOCATION

Genetic locus: OR5AU1 (human) mapping to 14q11.2; Olfr221 (mouse) mapping to 14 C2.

SOURCE

OR5AU1 (F-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 58-74 within an extracellular domain of OR5AU1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

OR5AU1 (F-10) is available conjugated to agarose (sc-398756 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398756 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398756 PE), fluorescein (sc-398756 FITC), Alexa Fluor® 488 (sc-398756 AF488), Alexa Fluor® 546 (sc-398756 AF546), Alexa Fluor® 594 (sc-398756 AF594) or Alexa Fluor® 647 (sc-398756 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398756 AF680) or Alexa Fluor® 790 (sc-398756 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398756 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

OR5AU1 (F-10) is recommended for detection of OR5AU1 of human origin, Olfr221 of mouse origin and Olr1638 of rat origin of mouse, rat and human 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), immunohistochemistry (including paraffin-embedded sections) (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 OR5AU1 siRNA (h): sc-92270, Olfr221 siRNA (m): sc-150693, OR5AU1 shRNA Plasmid (h): sc-92270-SH, Olfr221 shRNA Plasmid (m): sc-150693-SH, OR5AU1 shRNA (h) Lentiviral Particles: sc-92270-V and Olfr221 shRNA (m) Lentiviral Particles: sc-150693-V.

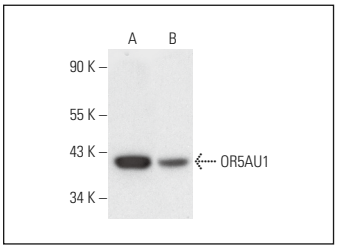
Molecular Weight of OR5AU1: 41 kDa.

Positive Controls: ALL-SIL whole cell lysate: sc-364356 or Jurkat whole cell lysate: sc-2204.

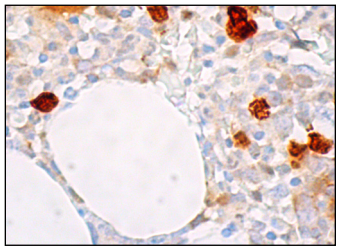
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



OR5AU1 (F-10): sc-398756. Western blot analysis of OR5AU1 expression in Jurkat (**A**) and ALL-SIL (**B**) whole cell lysates.



OR5AU1 (F-10): sc-398756. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing cytoplasmic staining of a subset of hematopoietic cells. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detected with m-IgGκ BP-B: sc-516142 and ImmunoCruz® ABC Kit: sc-516216.

STORAGE

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