SANTA CRUZ BIOTECHNOLOGY, INC.

REEP1 (A-8): sc-393242

BACKGROUND

Transport of G protein-coupled receptors (GPCRs) to the cell surface membrane is critical for receptor-ligand recognition. Mammalian GPCR odorant receptors (ORs), when heterologously expressed in cells, are poorly expressed on the cell surface. REEP1 (receptor expression-enhancing protein 1), is a 201 amino acid multi-pass mitochondrion membrane protein that belongs to the DP1 family. REEP1 interacts with odorant receptor proteins and may enhance the cell surface expression of odorant receptors. Mutations in the REEP1 gene are the third most common cause of hereditary spastic paraplegia (HSP) after spastin and atlastin gene mutations. Mutations in the REEP1 gene also cause spastic paraplegia autosomal dominant type 31, a neurodegenerative disorder. The REEP1 gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish, *A. thaliana* and rice, and maps to human chromosome 2p11.2.

REFERENCES

1. Saito, H., et al. 2004. RTP family members induce functional expression of mammalian odorant receptors. Cell 119: 679-691.
2. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 609139. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Züchner, S., et al. 2006. Mutations in the novel mitochondrial protein REEP1 cause hereditary spastic paraplegia type 31. Am. J. Hum. Genet. 79: 365-369.
4. Behrens, M., et al. 2006. Members of RTP and REEP gene families influence functional bitter taste receptor expression. J. Biol. Chem. 281: 20650-20659.

CHROMOSOMAL LOCATION

Genetic locus: REEP1 (human) mapping to 2p11.2; Reep1 (mouse) mapping to 6 C1.

SOURCE

REEP1 (A-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 145-169 near the C-terminus of REEP1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

REEP1 (A-8) is available conjugated to agarose (sc-393242 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393242 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393242 PE), fluorescein (sc-393242 FITC), Alexa Fluor® 488 (sc-393242 AF488), Alexa Fluor® 546 (sc-393242 AF546), Alexa Fluor® 594 (sc-393242 AF594) or Alexa Fluor® 647 (sc-393242 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393242 AF680) or Alexa Fluor® 790 (sc-393242 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393242 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

REEP1 (A-8) is recommended for detection of REEP1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for REEP1 siRNA (h): sc-94388, REEP1 siRNA (m): sc-152790, REEP1 shRNA Plasmid (h): sc-94388-SH, REEP1 shRNA Plasmid (m): sc-152790-SH, REEP1 shRNA (h) Lentiviral Particles: sc-94388-V and REEP1 shRNA (m) Lentiviral Particles: sc-152790-V.

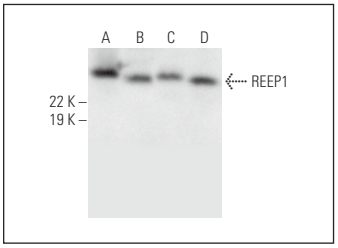
Molecular Weight of REEP1: 22 kDa.

Positive Controls: mouse testis extract: sc-2405, rat testis extract: sc-2400 or human testis extract: sc-363781.

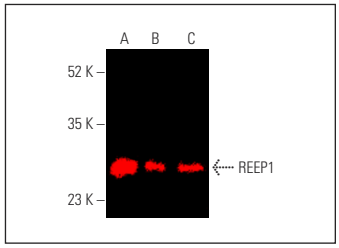
RECOMMENDED SUPPORT REAGENTS

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



REEP1 (A-8): sc-393242. Western blot analysis of REEP1 expression in mouse testis (**A**), rat testis (**B**), human testis (**C**) and mouse brain (**D**) tissue extracts.



REEP1 (A-8): sc-393242. Near-Infrared western blot analysis of REEP1 expression in rat cerebellum (**A**), rat testis (**B**) and mouse brain (**C**) tissue extracts. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_1 BP-CFL 790: sc-533666.

SELECT PRODUCT CITATIONS

1. Leca, I., et al. 2020. A proteomic survey of microtubule-associated proteins in a R402H TUBA1A mutant mouse. PLoS Genet. 16: e1009104.

STORAGE

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

RESEARCH USE

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