SANTA CRUZ BIOTECHNOLOGY, INC.

VSX1 (G-11): sc-393699

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Like other "paired-like" homeodomain family members, the visual system homeobox gene 1 (VSX1) is instrumental in craniofacial and ocular development; VSX1 plays a distinct role in retinal development. Also known as RINX (retinal inner nuclear layer homeobox), the VSX1 gene is expressed in embryonic craniofacial structures and in the adult retina. VSX1 is abundantly expressed in the inner nuclear layer (INL) of the retina. In mice, Vsx1 first detected in the bipolar cells of the retina five days postnatal. The VSX1 gene is also expressed in WERI, a retinoblastoma cell line that expresses retinal cone genes. The human VSX1 gene maps to chromosome 20p11.21 and encodes a 365 amino acid protein with five known splice variants. VSX1 mutations are implicated in two distinct corneal dystrophies, posterior polymorphous dystrophy (PPD) and keratoconus.

REFERENCES

1. Semina, E.V., Mintz-Hittner, H.A. and Murray, J.C. 2000. Isolation and characterization of a novel human paired-like homeodomain-containing transcription factor gene, VSX1, expressed in ocular tissues. Genomics 63: 289-293.
2. Hayashi, T., Huang, J. and Deeb, S.S. 2000. RINX(VSX1), a novel homeobox gene expressed in the inner nuclear layer of the adult retina. Genomics 67: 128-139.
3. Chow, R.L., Snow, B., Novak, J., Looser, J., Freund, C., Vidgen, D., Ploder, L. and McInnes, R.R. 2001. VSX1, a rapidly evolving paired-like homeobox gene expressed in cone bipolar cells. Mech. Dev. 109: 315-322.
4. Heon, E., Greenberg, A., Kopp, K.K., Rootman, D., Vincent, A.L., Billingsley, G., Priston, M., Dorval, K.M., Chow, R.L., McInnes, R.R., Heathcote, G., Westall, C., Sutphin, J.E., Semina, E., Bremner, R. and Stone, E.M. 2002. VSX1: a gene for posterior polymorphous dystrophy and keratoconus. Hum. Mol. Genet. 11: 1029-1036.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605020. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: VSX1 (human) mapping to 20p11.21; Vsx1 (mouse) mapping to 2 G3.

SOURCE

VSX1 (G-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 309-332 near the C-terminus of VSX1 of human 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.

Blocking peptide available for competition studies, sc-393699 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

VSX1 (G-11) is recommended for detection of VSX1 L1 isoform 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 VSX1 siRNA (h): sc-38806, VSX1 siRNA (m): sc-38807, VSX1 shRNA Plasmid (h): sc-38806-SH, VSX1 shRNA Plasmid (m): sc-38807-SH, VSX1 shRNA (h) Lentiviral Particles: sc-38806-V and VSX1 shRNA (m) Lentiviral Particles: sc-38807-V.

Molecular Weight of VSX1 isoforms L1/S1/S2/S3: 38/25/39/14 kDa.

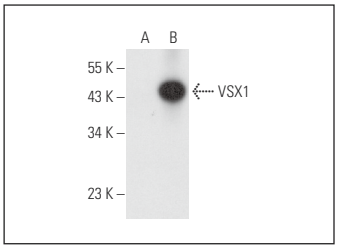
Molecular Weight of VSX1 isoforms 5/6/7/8: 30/23/25/32 kDa.

Positive Controls: VSX1 (m): 293T Lysate: sc-127778, Jurkat whole cell lysate: sc-2204 or K-562 whole cell lysate: sc-2203.

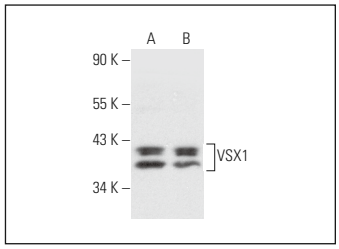
RECOMMENDED SUPPORT REAGENTS

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



VSX1 (G-11): sc-393699. Western blot analysis of VSX1 expression in non-transfected: sc-117752 (**A**) and mouse VSX1 transfected: sc-127778 (**B**) 293T whole cell lysates.



VSX1 (G-11): sc-393699. Western blot analysis of VSX1 expression in Jurkat (**A**) and K-562 (**B**) whole cell lysates.

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.