

HESX1 (G-10): sc-515477

BACKGROUND

The homeobox protein, HESX1, which is also known as Rathke's pouch homeobox, HANF, homeodomain transcription factor, and anterior-restricted homeobox protein is a transcription factor that belongs to the homeodomain family of DNA binding proteins. HESX1 is initially expressed in embryonic stem cells and the primitive forebrain, and is essential for normal development of the eyes and other anterior CNS structures, such as the hypothalamus, the pituitary gland and the olfactory bulbs. The homeobox gene *Hex1* is expressed in the anterior visceral endoderm (AVE), anterior axial mesoderm (AME), and anterior neural ectoderm (ANE) during early embryogenesis. Mutations in the *Hex1* gene are associated with disorders that are comparable with septo-optic dysplasia (SOD). These disorders are characterized by hypoplasia of the optic nerve, various types of forebrain defects and pituitary hormone deficiencies, including hypothyroidism. *Hex1* also acts as a transcriptional repressor of reporter gene constructs in tissue culture assays.

REFERENCES

- Dattani, M., et al. 1998. Mutations in the homeobox gene HESX1/Hex1 associated with Septo-Optic dysplasia in human and mouse. *Nat. Genet.* 19: 125-133.
- Dattani, M., et al. 1999. HESX1: a novel gene implicated in a familial form of septo-optic dysplasia. *Acta Paediatr. Suppl.* 88: 49-54.
- Dattani, M. et al. 2000. The molecular basis for developmental disorders of the pituitary gland in man. *Clin. Genet.* 57: 337-346.
- Pfaffle, R., et al. 2000. Idiopathic growth hormone deficiency: a vanishing diagnosis? *Horm. Res.* 53: 1-8.
- Dattani, M., et al. 2000. Molecular genetics of septo-optic dysplasia. *Horm. Res.* 53: 26-33.

CHROMOSOMAL LOCATION

Genetic locus: HESX1 (human) mapping to 3p14.3.

SOURCE

HESX1 (G-10) is a mouse monoclonal antibody raised against amino acids 91-185 mapping at the C-terminus of HESX1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HESX1 (G-10) is available conjugated to agarose (sc-515477 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515477 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515477 PE), fluorescein (sc-515477 FITC), Alexa Fluor[®] 488 (sc-515477 AF488), Alexa Fluor[®] 546 (sc-515477 AF546), Alexa Fluor[®] 594 (sc-515477 AF594) or Alexa Fluor[®] 647 (sc-515477 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-515477 AF680) or Alexa Fluor[®] 790 (sc-515477 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

HESX1 (G-10) is recommended for detection of HESX1 of 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).

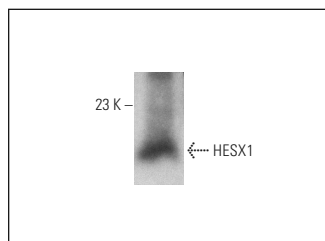
Suitable for use as control antibody for HESX1 siRNA (h): sc-38669, HESX1 shRNA Plasmid (h): sc-38669-SH and HESX1 shRNA (h) Lentiviral Particles: sc-38669-V.

Positive Controls: human thymus extract: sc-516711.

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



HESX1 (G-10): sc-515477. Western blot analysis of HESX1 expression in human thymus tissue extract.

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.

PROTOCOLS

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