

eHAND (E-10): sc-374296

BACKGROUND

dHAND (for deciduum, heart, autonomic nervous system and neural crest derivatives; also designated HAND2) and eHAND (also designated HAND1, HXT or Thing1) are members of a subclass of basic-helix-loop-helix transcription factors that are involved in cardiac development. dHAND and eHAND are expressed in the heart after cardiac looping, and they participate in left-right cardiac asymmetry. dHAND is expressed predominantly on the right side of the looped heart tube and in the pulmonary ventricle, where it activates transcription of various genes, including Ufd1 (for ubiquitin fusion degradation) and Cdc45. In addition, dHAND is expressed in sympathetic neurons and chromaffin cells throughout embryonic and fetal development and mediates neural crest development. eHAND expression is primarily observed on the left side and in the systemic ventricle, suggesting that these proteins are involved in the development of segments of the heart tube, which give rise to specific heart chambers during cardiogenesis.

REFERENCES

1. Srivastava, D., et al. 1995. A subclass of bHLH proteins required for cardiac morphogenesis. *Science* 270: 1995-1999.
2. Srivastava, D., et al. 1997. Regulation of cardiac mesodermal and neural crest development by the bHLH transcription factor, dHAND. *Nat. Genet.* 16: 154-160.
3. Knofler, M., et al. 1998. Molecular cloning of the human HAND1 gene/cDNA and its tissue-restricted expression in cytotrophoblastic cells and heart. *Gene* 224: 77-86.
4. Thomas, T., et al. 1998. A signaling cascade involving endothelin-1, dHAND and Msx1 regulates development of neural-crest-derived branchial arch mesenchyme. *Development* 125: 3005-3014.
5. Knofler, M., et al. 1998. Molecular cloning of the human Hand1 gene/cDNA and its tissue-restricted expression in cytotrophoblastic cells and heart. *Gene* 224: 77-86.

CHROMOSOMAL LOCATION

Genetic locus: HAND1 (human) mapping to 5q33.2; Hand1 (mouse) mapping to 11 B1.3.

SOURCE

eHAND (E-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 174-213 near the C-terminus of eHAND of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-374296 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-374296 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

eHAND (E-10) is recommended for detection of eHAND 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).

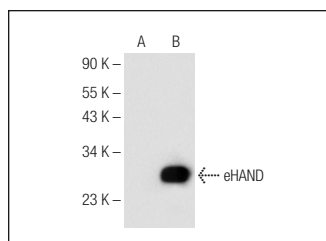
Suitable for use as control antibody for eHAND siRNA (h): sc-37922, eHAND siRNA (m): sc-37923, eHAND shRNA Plasmid (h): sc-37922-SH, eHAND shRNA Plasmid (m): sc-37923-SH, eHAND shRNA (h) Lentiviral Particles: sc-37922-V and eHAND shRNA (m) Lentiviral Particles: sc-37923-V.

eHAND (E-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of eHAND: 27 kDa.

Positive Controls: eHAND (h): 293T Lysate: sc-110104.

DATA



eHAND (E-10): sc-374296. Western blot analysis of eHAND expression in non-transfected: sc-117752 (A) and human eHAND transfected: sc-110104 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Suliman, H.B., et al. 2016. Heme oxygenase-1/carbon monoxide system and embryonic stem cell differentiation and maturation into cardiomyocytes. *Antioxid. Redox Signal.* 24: 345-360.

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.