

# eHAND (H-100): sc-22817

## 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 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 chromafin 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. Thomas, T., et al. 1998. The bHLH factors, dHAND and eHAND, specify pulmonary and systemic cardiac ventricles independent of left-right sidedness. *Dev. Biol.* 196: 228-236.
6. Srivastava, D. 1999. HAND proteins: molecular mediators of cardiac development and congenital heart disease. *Trends Cardiovasc. Med.* 9: 11-18.
7. Yamagishi, H., et al. 1999. A molecular pathway revealing a genetic basis for human cardiac and craniofacial defects. *Science* 283: 1158-1161.

## CHROMOSOMAL LOCATION

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

## SOURCE

eHAND (H-100) is a rabbit polyclonal antibody raised against amino acids 1-45 of eHAND of human origin.

## PRODUCT

Each vial contains 200 µg IgG 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-22817 X, 200 µg/0.1 ml.

## APPLICATIONS

eHAND (H-100) is recommended for detection of eHAND of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

eHAND (H-100) is also recommended for detection of eHAND in additional species, including equine, canine, bovine and porcine.

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 (H-100) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of eHAND: 27 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

**MONOS**  
Satisfaction  
Guaranteed

Try **eHAND (F-7): sc-390376** or **eHAND (E-6): sc-515047**, our highly recommended monoclonal alternatives to eHAND (H-100).