

dHAND (M-19): sc-9409



The Power to Question

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 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.

CHROMOSOMAL LOCATION

Genetic locus: HAND2 (human) mapping to 4q34.1; Hand2 (mouse) mapping to 8 B2.

SOURCE

dHAND (M-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of dHAND of mouse 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-9409 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-9409 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

dHAND (M-19) is recommended for detection of dHAND of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 dHAND siRNA (h): sc-37920, dHAND siRNA (m): sc-37921, dHAND shRNA Plasmid (h): sc-37920-SH, dHAND shRNA Plasmid (m): sc-37921-SH, dHAND shRNA (h) Lentiviral Particles: sc-37920-V and dHAND shRNA (m) Lentiviral Particles: sc-37921-V.

dHAND (M-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of dHAND: 27 kDa.

Positive Controls: ES-2 cell lysate: sc-24674 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

- Bar, H., et al. 2003. Upregulation of embryonic transcription factors in right ventricular hypertrophy. *Basic Res. Cardiol.* 98: 285-294.
- Thewissen, J.G., et al. 2006. Developmental basis for hind-limb loss in dolphins and origin of the cetacean bodyplan. *Proc. Natl. Acad. Sci. USA* 103: 8414-8418.
- Doxakis, E., et al. 2008. HAND transcription factors are required for neonatal sympathetic neuron survival. *EMBO Rep.* 9: 1041-1047.
- Galli, A., et al. 2010. Distinct roles of Hand2 in initiating polarity and posterior Shh expression during the onset of mouse limb bud development. *PLoS Genet.* 6: e1000901.
- Björck, H.M., et al. 2012. Characterization of shear-sensitive genes in the normal rat aorta identifies Hand2 as a major flow-responsive transcription factor. *PLoS ONE* 7: e52227.
- Cooke, P.S., et al. 2012. Brief exposure to progesterone during a critical neonatal window prevents uterine gland formation in mice. *Biol. Reprod.* 86: 63.

STORAGE

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

PROTOCOLS

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



Try **dHAND (A-12): sc-398167** or **dHAND (HAND2C1a): sc-130629**, our highly recommended monoclonal alternatives to dHAND (M-19).