

# Hop (E-1): sc-398703

## BACKGROUND

Hop encodes a homeodomain-containing protein derived from several transcript splice variants. Nkx2.5-mediated Hop gene expression initiates early during cardiogenesis and continues in cardiomyocytes throughout embryonic and postnatal development. Hop associates with and inhibits *trans*-acting serum response factor (SRF)-dependent transcription, which regulates the opposing processes of proliferation and myogenesis. Hop modulation of SRF activity ensures a balance between cardiomyocyte proliferation and differentiation during cardiac morphogenesis.

## CHROMOSOMAL LOCATION

Genetic locus: HOPX (human) mapping to 4q12; Hopx (mouse) mapping to 5 C3.3.

## SOURCE

Hop (E-1) is a mouse monoclonal antibody raised against amino acids 1-73 representing full length Hop of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Hop (E-1) is available conjugated to agarose (sc-398703 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398703 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398703 PE), fluorescein (sc-398703 FITC), Alexa Fluor® 488 (sc-398703 AF488), Alexa Fluor® 546 (sc-398703 AF546), Alexa Fluor® 594 (sc-398703 AF594) or Alexa Fluor® 647 (sc-398703 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398703 AF680) or Alexa Fluor® 790 (sc-398703 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

## APPLICATIONS

Hop (E-1) is recommended for detection of Hop 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), immunohistochemistry (including paraffin-embedded sections) (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 Hop siRNA (h): sc-38671, Hop siRNA (m): sc-38672, Hop shRNA Plasmid (h): sc-38671-SH, Hop shRNA Plasmid (m): sc-38672-SH, Hop shRNA (h) Lentiviral Particles: sc-38671-V and Hop shRNA (m) Lentiviral Particles: sc-38672-V.

Molecular Weight of Hop: 9 kDa.

Positive Controls: Hop (m): 293T Lysate: sc-120878 or human placenta extract: sc-363772.

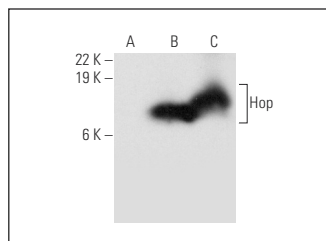
## RESEARCH USE

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

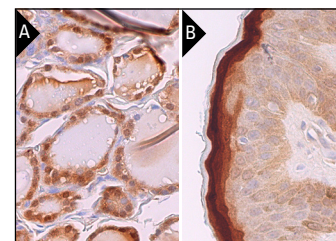
## STORAGE

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

## DATA



Hop (E-1): sc-398703. Western blot analysis of Hop expression in non-transfected: sc-117752 (A) and mouse Hop transfected: sc-120878 (B) 293T whole cell lysates and human placenta tissue extract (C).



Hop (E-1): sc-398703. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing nuclear and cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing nuclear and cytoplasmic staining of keratinocytes (B).

## SELECT PRODUCT CITATIONS

- Sloan, S.A., et al. 2017. Human astrocyte maturation captured in 3D cerebral cortical spheroids derived from pluripotent stem cells. *Neuron* 95: 779-790.
- Ota, C., et al. 2018. Dynamic expression of HOPX in alveolar epithelial cells reflects injury and repair during the progression of pulmonary fibrosis. *Sci. Rep.* 8: 12983.
- Ma, Q., et al. 2018. Regeneration of functional alveoli by adult human SOX9<sup>+</sup> airway basal cell transplantation. *Protein Cell* 9: 267-282.
- Yoon, S.J., et al. 2019. Reliability of human cortical organoid generation. *Nat. Methods* 16: 75-78.
- Mori, M., et al. 2019. Generation of functional lungs via conditional blastocyst complementation using pluripotent stem cells. *Nat. Med.* 25: 1691-1698.
- Kalebic, N., et al. 2019. Neocortical expansion due to increased proliferation of basal progenitors is linked to changes in their morphology. *Cell Stem Cell* 24: 535-550.
- Wu, H., et al. 2020. Progressive pulmonary fibrosis is caused by elevated mechanical tension on alveolar stem cells. *Cell* 180: 107-121.
- Bhaduri, A., et al. 2020. Cell stress in cortical organoids impairs molecular subtype specification. *Nature* 578: 142-148.
- Daniel, E., et al. 2020. Cyp26b1 is a critical regulator of distal airway epithelial differentiation during lung development. *Development* 147 pii: dev181560.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.