

# Nodal (H-110): sc-28913

## BACKGROUND

The transforming growth factor  $\beta$  (TGF $\beta$ ) superfamily is composed of numerous growth and differentiation factors, including TGF $\beta$ 1-3, Mullerian inhibiting substance (MIS), growth/differentiation factor (GDF) 1-9, bone morphogenic protein (BMP) 2-8, glial cell line-derived neurotrophic factor (GDNF), Inhibin  $\alpha$ ,  $\beta$ -A,  $\beta$ -B and  $\beta$ -C, Lefty and Nodal. Members of the TGF $\beta$  superfamily are involved in embryonic development and adult tissue homeostasis. Ectodermal cells through the primitive streak delaminate and differentiate into mesoderm during gastrulation. Nodal expression is detectable in the primitive streak at the time of mesoderm formation, indicating a potential role for Nodal in mesoderm formation. Nodal has also been shown to be involved in the direction of heart looping and embryonic turning.

## CHROMOSOMAL LOCATION

Genetic locus: NODAL (human) mapping to 10q22.1; Nodal (mouse) mapping to 10 B4.

## SOURCE

Nodal (H-110) is a rabbit polyclonal antibody raised against amino acids 238-347 mapping at the C-terminus of Nodal of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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

## APPLICATIONS

Nodal (H-110) is recommended for detection of precursor and mature Nodal of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

Nodal (H-110) is also recommended for detection of precursor and mature Nodal in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Nodal siRNA (h): sc-45478, Nodal siRNA (m): sc-39795, Nodal shRNA Plasmid (h): sc-45478-SH, Nodal shRNA Plasmid (m): sc-39795-SH, Nodal shRNA (h) Lentiviral Particles: sc-45478-V and Nodal shRNA (m) Lentiviral Particles: sc-39795-V.

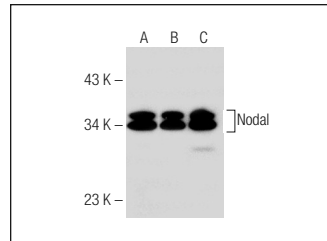
Molecular Weight of Nodal: 40 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, THP-1 cell lysate: sc-2238 or MIA PaCa-2 cell lysate: sc-2285.

## RESEARCH USE

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

## DATA



Nodal (H-110): sc-28913. Western blot analysis of Nodal expression in HeLa (A), THP-1 (B) and MIA PaCa-2 (C) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Strizzi, L., et al. 2009. Nodal as a biomarker for melanoma progression and a new therapeutic target for clinical intervention. *Expert Rev. Dermatol.* 4: 67-68.
- Lee, C.C., et al. 2010. Nodal promotes growth and invasion in human gliomas. *Oncogene* 29: 3110-3123.
- Hardy, K.M., et al. 2010. Regulation of the embryonic morphogen Nodal by Notch4 facilitates manifestation of the aggressive melanoma phenotype. *Cancer Res.* 70: 10340-10350.
- Hueng, D.Y., et al. 2011. Inhibition of Nodal suppresses angiogenesis and growth of human gliomas. *J. Neurooncol.* 104: 21-31.
- Park, C.B. and Dufort, D. 2011. Nodal expression in the uterus of the mouse is regulated by the embryo and correlates with implantation. *Biol. Reprod.* 84: 1103-1110.
- Strizzi, L., et al. 2012. Potential for the embryonic morphogen Nodal as a prognostic and predictive biomarker in breast cancer. *Breast Cancer Res.* 14: R75.
- Park, C.B., et al. 2012. NODAL in the uterus is necessary for proper placental development and maintenance of pregnancy. *Biol. Reprod.* 86: 194.
- Cavallari, C., et al. 2013. Role of Lefty in the anti tumor activity of human adult liver stem cells. *Oncogene* 32: 819-826.



Try **Nodal (G-10): sc-373910** or **Nodal (A-9): sc-377508**, our highly recommended monoclonal alternatives to Nodal (H-110).