

Nodal (P-15): sc-34839

BACKGROUND

The transforming growth factor β (TGF β) superfamily is composed of numerous growth and differentiation factors, including TGF β 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 α , β -A, β -B and β -C, Lefty and Nodal. Members of the TGF β 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.

REFERENCES

1. Bellairs, R. 1986. The primitive streak. *Anat. Embryol.* 174: 1-14.
2. Massague, J., et al. 1987. Multiple type- β transforming growth factors and their receptors. *J. Cell. Physiol. Suppl.* 5: 43-47.
3. Massague, J. 1990. The transforming growth factor- β family. *Annu. Rev. Cell Biol.* 6: 597-641.
4. Zhou, X., et al. 1993. Nodal is a novel TGF β -like gene expressed in the mouse node during gastrulation. *Nature* 361: 543-547.
5. Collignon, J., et al. 1996. Relationship between asymmetric Nodal expression and the direction of embryonic turning. *Nature* 381: 155-158.
6. McPherron, A.C., et al. 1997. Regulation of skeletal muscle mass in mice by a new TGF β superfamily member. *Nature* 387: 83-90.

CHROMOSOMAL LOCATION

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

SOURCE

Nodal (P-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Nodal of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-34839 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

Nodal (P-15) 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), 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 (P-15) 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.

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.

RESEARCH USE

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



Try **Nodal (G-10): sc-373910** or **Nodal (A-9): sc-377508**, our highly recommended monoclonal alternatives to Nodal (P-15).