

brachyury (N-19): sc-17743

BACKGROUND

The T-box gene family consists of members that share a unique DNA binding domain. The best characterized T-box (TBX) gene, brachyury or T, encodes a transcription factor that plays an important role in early vertebrate development. TBX genes are a family of developmental regulators with more than 20 members recently identified among invertebrates and vertebrates. Mutations in TBX genes have been found to cause several human diseases. The understanding of functional mechanisms of TBX products has come mainly from the prototypical T/brachyury protein, which is a transcription activator. The T-domain is a highly conserved DNA-binding motif originally defined in brachyury and characteristic of the TBX family of transcription factors. The murine brachyury (T) gene is required in posterior mesoderm formation and axial development. Mutant embryos lacking T gene function are deficient in notochord differentiation and posterior mesoderm formation, but develop anterior mesoderm.

CHROMOSOMAL LOCATION

Genetic locus: T (human) mapping to 6q27; T (mouse) mapping to 17 A1.

SOURCE

brachyury (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of brachyury 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-17743 X, 100 µg/0.1 ml.

Blocking peptide available for competition studies, sc-17743 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

brachyury (N-19) is recommended for detection of brachyury 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), 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).

brachyury (N-19) is also recommended for detection of brachyury in additional species, including equine, canine and porcine.

Suitable for use as control antibody for brachyury siRNA (h): sc-29820, brachyury siRNA (m): sc-29821, brachyury shRNA Plasmid (h): sc-29820-SH, brachyury shRNA Plasmid (m): sc-29821-SH, brachyury shRNA (h) Lentiviral Particles: sc-29820-V and brachyury shRNA (m) Lentiviral Particles: sc-29821-V.

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

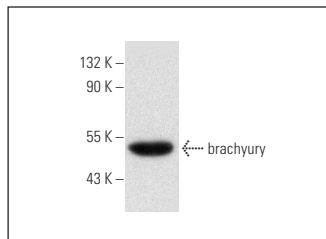
Molecular Weight of brachyury: 49 kDa.

Positive Controls: F9 cell lysate: sc-2245 or A549 cell lysate: sc-2413.

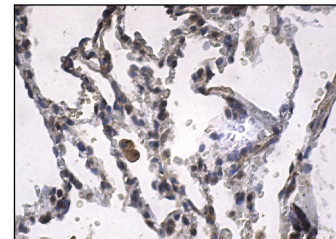
STORAGE

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

DATA



brachyury (N-19): sc-17743. Western blot analysis of brachyury expression in A549 whole cell lysate.



brachyury (N-19): sc-17743. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing cytoplasmic staining of macrophages.

SELECT PRODUCT CITATIONS

- Nishiyama, M., et al. 2004. Early embryonic death in mice lacking the β -catenin-binding protein Duplin. *Mol. Cell. Biol.* 24: 8386-8394.
- Dahia, C.L., et al. 2009. Postnatal growth, differentiation, and aging of the mouse intervertebral disc. *Spine* 34: 447-455.
- Burtscher, I. and Lickert, H. 2009. Foxa2 regulates polarity and epithelialization in the endoderm germ layer of the mouse embryo. *Development* 136: 1029-1038.
- Adachi, K., et al. 2010. Role of SOX2 in maintaining pluripotency of human embryonic stem cells. *Genes Cells* 15: 455-470.
- Brüderlein, S., et al. 2010. Molecular characterization of putative chordoma cell lines. *Sarcoma* 2010: 630129.
- Lanner, F., et al. 2010. Heparan sulfation-dependent fibroblast growth factor signaling maintains embryonic stem cells primed for differentiation in a heterogeneous state. *Stem Cells* 28: 191-200.
- Wu, X., et al. 2011. Spermatogonial stem cell self-renewal requires ETV5-mediated downstream activation of Brachyury in mice. *Biol. Reprod.* 85: 1114-1123.
- Bai, G.Y., et al. 2016. Embryos aggregation improves development and imprinting gene expression in mouse parthenogenesis. *Dev. Growth Differ.* 58: 270-279.

RESEARCH USE

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



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