SANTA CRUZ BIOTECHNOLOGY, INC.

brachyury (C-19): sc-17745

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-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-17745 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-17745 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

brachyury (C-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).

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

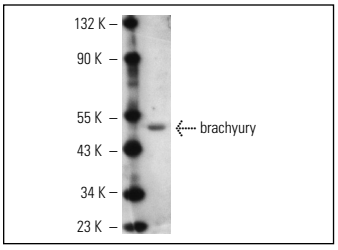
Molecular Weight of brachyury: 49 kDa.

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

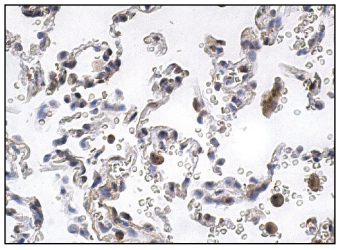
STORAGE

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

DATA



brachyury (C-19): sc-17745. Western blot analysis of brachyury expression in F9 whole cell lysate.



brachyury (C-19): sc-17745. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing cytoplasmic staining of macrophages.

SELECT PRODUCT CITATIONS

1. Van Eynde, A., et al. 2004. The nuclear scaffold protein NIPP1 is essential for early embryonic development and cell proliferation. Mol. Cell. Biol. 24: 5863-5874.
2. Bernemann, C., et al. 2011. Distinct developmental ground states of epiblast stem cell lines determine different pluripotency features. Stem Cells 29: 1496-1503.
3. Hsu, W., et al. 2011. Generation of chordoma cell line JHC7 and the identification of Brachyury as a novel molecular target. J. Neurosurg. 115: 760-769.
4. Siu, I.M., et al. 2012. Establishment and characterization of a primary human chordoma xenograft model. J. Neurosurg. 116: 801-809.
5. Liu, L., et al. 2012. Chemically-defined scaffolds created with electrospun synthetic nanofibers to maintain mouse embryonic stem cell culture under feeder-free conditions. Biotechnol. Lett. 34: 1951-1957.
6. Soma, M., et al. 2012. Preferential emergence of cell types expressing markers for primitive endoderm lineages in mouse embryonic stem cells expressing exogenous EGAM1 homeoprotein. J. Biosci. Bioeng. 114: 342-346.
7. Trucco, M.M., et al. 2013. A novel chordoma xenograft allows *in vivo* drug testing and reveals the importance of NF-κB signaling in chordoma biology. PLoS ONE. 8: e79950.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **brachyury (D-10): sc-166962** or **brachyury (A-4): sc-374321**, our highly recommended monoclonal alternatives to brachyury (C-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **brachyury (D-10): sc-166962**.