

FAST-1/2 (B-25): sc-133575

BACKGROUND

Xenopus winged-helix factor, xFAST-1 (forkhead activin signal transducer-1) is a transcription factor that forms a complex with the receptor-regulated Smad protein, Smad2, and directly binds to activin response elements on DNA. The human homolog FAST-1 and the corresponding mouse homolog, designated FAST-2, share significant sequence homology with xFAST-1, including a conserved N-terminal forkhead domain that consists of 110 amino acid residues and is essential for binding DNA and regulating transcription in embryogenesis, in tumorigenesis and in the maintenance of differentiated cell states. FAST-1 and FAST-2 also contain a distinct C-terminal Smad interaction domain that is required for the association with various Smad proteins, including Smad2, Smad3 and Smad4. Expression of FAST-1 and FAST-2 is predominantly observed during early development, with lower levels detected in adult tissues. FAST-1 and FAST-2 mediated DNA binding is attenuated by both TGF β and activin, indicating that these FAST proteins mediate TGF β induced signal transduction.

REFERENCES

- Chen, X., Weisberg, E., Fridmacher, V., Watanabe, M., Naco, G. and Whitman, M. 1997. Smad4 and FAST-1 in the assembly of activin-responsive factor. *Nature* 389: 85-89.
- Labbe, E., Silvestri, C., Hoodless, P.A., Wrana, J.L. and Attisano, L. 1998. Smad2 and Smad3 positively and negatively regulate TGF β -dependent transcription through the forkhead DNA-binding protein FAST-2. *Mol. Cell.* 2: 109-120.
- Zhou, S., Zawel, L., Lengauer, C., Kinzler, K.W. and Vogelstein, B. 1998. Characterization of human FAST-1, a TGF β and activin signal transducer. *Mol. Cell.* 2: 121-127.
- Weisberg, E., Winnier, G.E., Chen, X., Farnsworth, C.L., Hogan, B.L. and Whitman, M. 1998. A mouse homologue of FAST-1 transduces TGF β superfamily signals and is expressed during early embryogenesis. *Mech. Dev.* 79: 17-27.
- Liu, B., Dou, C.L., Prabhu, L. and Lai, E. 1999. FAST-2 is a mammalian winged-helix protein which mediates transforming growth factor β signals. *Mol. Cell. Biol.* 19: 424-430.

CHROMOSOMAL LOCATION

Genetic locus: Foxh1 (mouse) mapping to 15 D3.

SOURCE

FAST-1/2 (B-25) is an affinity purified rabbit polyclonal antibody raised against synthetic FAST-1/2 peptide of mouse origin.

PRODUCT

Each vial contains 50 μ g IgG in 500 μ l PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

RESEARCH USE

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

APPLICATIONS

FAST-1/2 (B-25) is recommended for detection of FAST-1/2 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for FAST-1/2 siRNA (m): sc-35363, FAST-1/2 shRNA Plasmid (m): sc-35363-SH and FAST-1/2 shRNA (m) Lentiviral Particles: sc-35363-V.

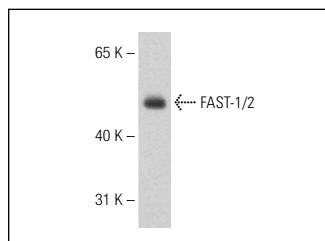
Molecular Weight of FAST-1/2: 50 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



FAST-1/2 (B-25): sc-133575. Western blot analysis of FAST-1/2 expression in NIH/3T3 whole cell lysate.

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.

MONOS
Satisfaction
Guaranteed

Try **FAST-1/2 (D-12): sc-377358** or **FAST-1/2 (H-7): sc-376888**, our highly recommended monoclonal alternatives to FAST-1/2 (B-25).