

FAST-1/2 (F-20): sc-12437

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

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- Labbe, E., et al. 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., et al. 1998. Characterization of human FAST-1, a TGF β and activin signal transducer. *Mol. Cell* 2: 121-127.
- Weisberg, E., et al. 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., et al. 1999. FAST-2 is a mammalian winged-helix protein which mediates transforming growth factor β signals. *Mol. Cell. Biol.* 19: 424-430.
- Yeo, C.Y., et al. 1999. The role of FAST-1 and Smads in transcriptional regulation by activin during early *Xenopus* embryogenesis. *J. Biol. Chem.* 274: 26584-26590.

CHROMOSOMAL LOCATION

Genetic locus: FOXH1 (human) mapping to 8q24.3; Foxh1 (mouse) mapping to 15 D3.

SOURCE

FAST-1/2 (F-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of FAST-1 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-12437 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-12437 X, 200 μ g/0.1 ml.

APPLICATIONS

FAST-1/2 (F-20) is recommended for detection of FAST-1 and FAST-2 of mouse, rat and human 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)], 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).

FAST-1/2 (F-20) is also recommended for detection of FAST-1 and FAST-2 in additional species, including equine, canine, bovine and porcine.

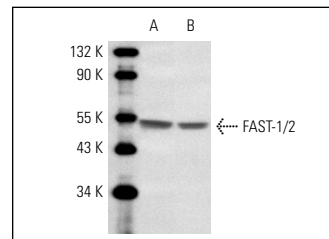
Suitable for use as control antibody for FAST-1/2 siRNA (h): sc-35364, FAST-1/2 siRNA (m): sc-35363, FAST-1/2 shRNA Plasmid (h): sc-35364-SH, FAST-1/2 shRNA Plasmid (m): sc-35363-SH, FAST-1/2 shRNA (h) Lentiviral Particles: sc-35364-V and FAST-1/2 shRNA (m) Lentiviral Particles: sc-35363-V.

FAST-1/2 (F-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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

Positive Controls: FAST-1 (86-365): sc-4450 WB, KNRK whole cell lysate: sc-2214 or Jurkat whole cell lysate: sc-2204.

DATA



FAST-1/2 (F-20): sc-12437. Western blot analysis of FAST-1/2 expression in Jurkat (A) and K-562 (B) whole cell lysates.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



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 (F-20).