SANTA CRUZ BIOTECHNOLOGY, INC.

FAST-1/2 (D-12): sc-377358

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 TFGβ and activin, indicating that these FAST proteins mediate TFGβ induced signal transduction.

REFERENCE

1. Chen, X., et al. 1997. Smad4 and FAST-1 in the assembly of activin-responsive factor. Nature 389: 85-89.
2. Labbe, E., et al. 1998. Smad2 and Smad3 positively and negatively regulate TGF β-dependent transcription through the forkhead DNA-binding protein FAST2. Mol. Cell 2: 109-120.
3. Zhou, S., et al. 1998. Characterization of human FAST-1, a TGF β and activin signal transducer. Mol. Cell 2: 121-127.

CHROMOSOMAL LOCATION

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

SOURCE

FAST-1/2 (D-12) is a mouse monoclonal antibody raised against amino acids 86-365 mapping near the C-terminus of FAST-1/2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain 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-377358 X, 200 µg/0.1 ml.

FAST-1/2 (D-12) is available conjugated to agarose (sc-377358 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377358 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377358 PE), fluorescein (sc-377358 FITC), Alexa Fluor® 488 (sc-377358 AF488), Alexa Fluor® 546 (sc-377358 AF546), Alexa Fluor® 594 (sc-377358 AF594) or Alexa Fluor® 647 (sc-377358 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377358 AF680) or Alexa Fluor® 790 (sc-377358 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

FAST-1/2 (D-12) is recommended for detection of FAST-1 and FAST-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) 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 (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 (D-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

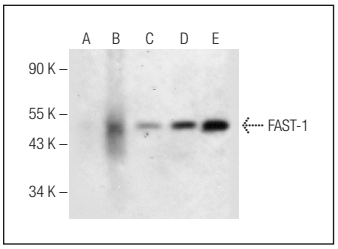
Molecular Weight of FAST-1/2: 50 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, Jurkat whole cell lysate: sc-2204 or FAST-1 (h): 293T Lysate: sc-128600.

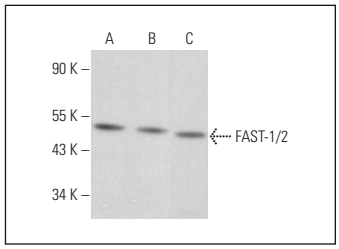
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



FAST-1/2 (D-12): sc-377358. Western blot analysis of FAST-1 expression in non-transfected 293T: sc-117752 (**A**), human FAST-1 transfected 293T: sc-128600 (**B**), Jurkat (**C**), K-562 (**D**) and KNRK (**E**) whole cell lysates.



FAST-1/2 (D-12): sc-377358. Western blot analysis of FAST-1/2 expression in TF-1 (**A**), HEL 92.1.7 (**B**) and F9 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Chen, Y.W., et al. 2014. Smad4 Loss triggers the phenotypic changes of pancreatic ductal adenocarcinoma cells. BMC Cancer 14: 181.

STORAGE

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