

# Fox-1 (A-12): sc-515244

## BACKGROUND

Fox-1, also known as A2BP, A2BP1 or HRNBP1, is a 397 amino acid protein that localizes to both the nucleus and the cytoplasm and contains one RRM domain. Expressed predominately in muscle and brain tissue, Fox-1 interacts with Ataxin-2 and functions as an RNA-binding protein that regulates alternative splicing events during erythropoiesis, specifically by binding to 5'-UGCAUGU-3' DNA elements. Multiple isoforms of Fox-1 exist due to alternative splicing events. The gene encoding Fox-1 maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, as is Crohn's disease, which is a gastrointestinal inflammatory condition.

## REFERENCES

- Shibata, H., et al. 2000. A novel protein with RNA-binding motifs interacts with ataxin-2. *Hum. Mol. Genet.* 9: 1303-1313.
- Auweter, S.D., et al. 2006. Molecular basis of RNA recognition by the human alternative splicing factor Fox-1. *EMBO J.* 25: 163-173.
- Martin, C.L., et al. 2007. Cytogenetic and molecular characterization of A2BP1/FOX1 as a candidate gene for autism. *Am. J. Med. Genet. B Neuropsychiatr. Genet.* 144B: 869-876.
- Zhou, H.L., et al. 2007. Role for Fox-1/Fox-2 in mediating the neuronal pathway of calcitonin/calcitonin gene-related peptide alternative RNA processing. *Mol. Cell. Biol.* 27: 830-841.

## CHROMOSOMAL LOCATION

Genetic locus: RBFOX1 (human) mapping to 16p13.3; Rbfox1 (mouse) mapping to 16 A1.

## SOURCE

Fox-1 (A-12) is a mouse monoclonal antibody raised against amino acids 38-118 mapping near the N-terminus of Fox-1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> 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-515244 X, 200 µg/0.1 ml.

Fox-1 (A-12) is available conjugated to agarose (sc-515244 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515244 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515244 PE), fluorescein (sc-515244 FITC), Alexa Fluor® 488 (sc-515244 AF488), Alexa Fluor® 546 (sc-515244 AF546), Alexa Fluor® 594 (sc-515244 AF594) or Alexa Fluor® 647 (sc-515244 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515244 AF680) or Alexa Fluor® 790 (sc-515244 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

Fox-1 (A-12) is recommended for detection of Fox-1 isoforms 1-5 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 Fox-1 siRNA (h): sc-93015, Fox-1 siRNA (m): sc-145218, Fox-1 shRNA Plasmid (h): sc-93015-SH, Fox-1 shRNA Plasmid (m): sc-145218-SH, Fox-1 shRNA (h) Lentiviral Particles: sc-93015-V and Fox-1 shRNA (m) Lentiviral Particles: sc-145218-V.

Fox-1 (A-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Fox-1: 43 kDa.

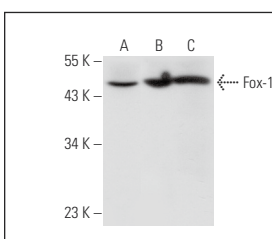
Positive Controls: Hep G2 cell lysate: sc-2227, rat heart extract: sc-2393 or human skeletal muscle extract: sc-363776.

## RECOMMENDED SUPPORT REAGENTS

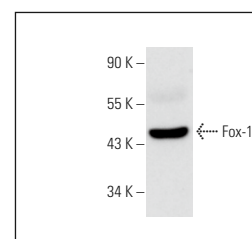
To ensure optimal results, the following support reagents are recommended:

- 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.
- Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- 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



Fox-1 (A-12): sc-515244. Western blot analysis of Fox-1 expression in Hep G2 whole cell lysate (A) and human brain (B) and human skeletal muscle (C) tissue extracts.



Fox-1 (A-12): sc-515244. Western blot analysis of Fox-1 expression in rat heart tissue extract.

## SELECT PRODUCT CITATIONS

- Shen, F., et al. 2021. Rbfox-1 contributes to CaMKIIα expression and intracerebral hemorrhage-induced secondary brain injury via blocking micro-RNA-124. *J. Cereb. Blood Flow Metab.* 41: 530-545.

## STORAGE

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

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