

FARP2 (H-9): sc-390744

BACKGROUND

FARP2 (FERM, RhoGEF and pleckstrin domain-containing protein 2), also known as PLEKHC3 or FERM domain including RhoGEF (FIR), is a 1,545 amino acid protein that contains one FERM domain, one DH domain and 2 PH domains. It exists as two alternatively spliced isoforms that are abundantly expressed in brain, lung, and testis as well as in embryonic hippocampal and cortical neurons. FARP2 functions as a Rho-guanine nucleotide exchange factor that activates RAC1 and is thought to regulate neurite remodeling of embryonic neurons. Sema3A binding to neuropilin-1 induces the dissociation of FARP2 from plexin-A1, thereby activating FARP2's Rac GEF activity which is critical for repulsion of outgrowing axons and suppression of neuronal adhesion. Downregulation of the FARP2 gene has been implicated in autism.

REFERENCES

1. Kubo, T., et al. 2002. A novel FERM domain including guanine nucleotide exchange factor is involved in Rac signaling and regulates neurite remodeling. *J. Neurosci.* 22: 8504-8513.
2. Kawakita, A., et al. 2003. Developmental regulation of FERM domain including guanine nucleotide exchange factor gene expression in the mouse brain. *Brain Res. Dev. Brain Res.* 144: 181-189.
3. Madura, T., et al. 2003. Expression of FERM domain including guanine nucleotide exchange factor mRNA in adult rat brain. *Brain Res. Mol. Brain Res.* 114: 163-167.
4. Toyofuku, T., et al. 2005. FARP2 triggers signals for Sema3A-mediated axonal repulsion. *Nat. Neurosci.* 8: 1712-1719.

CHROMOSOMAL LOCATION

Genetic locus: FARP2 (human) mapping to 2q37.3; Farp2 (mouse) mapping to 1 D.

SOURCE

FARP2 (H-9) is a mouse monoclonal antibody raised against amino acids 351-549 mapping within an internal region of FARP2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FARP2 (H-9) is available conjugated to agarose (sc-390744 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390744 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390744 PE), fluorescein (sc-390744 FITC), Alexa Fluor® 488 (sc-390744 AF488), Alexa Fluor® 546 (sc-390744 AF546), Alexa Fluor® 594 (sc-390744 AF594) or Alexa Fluor® 647 (sc-390744 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390744 AF680) or Alexa Fluor® 790 (sc-390744 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

RESEARCH USE

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

APPLICATIONS

FARP2 (H-9) is recommended for detection of FARP2 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 FARP2 siRNA (h): sc-94823, FARP2 siRNA (m): sc-145072, FARP2 shRNA Plasmid (h): sc-94823-SH, FARP2 shRNA Plasmid (m): sc-145072-SH, FARP2 shRNA (h) Lentiviral Particles: sc-94823-V and FARP2 shRNA (m) Lentiviral Particles: sc-145072-V.

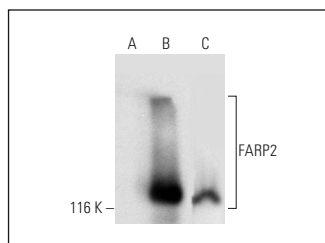
Molecular Weight of FARP2 isoforms: 120/73 kDa.

Positive Controls: FARP2 (m2): 293T Lysate: sc-110246, SJRH30 cell lysate: sc-2287 or 3T3-L1 cell lysate: sc-2243.

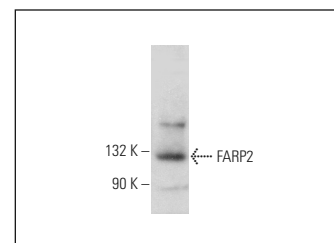
RECOMMENDED SUPPORT REAGENTS

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



FARP2 (H-9): sc-390744. Western blot analysis of FARP2 expression in non-transfected 293T: sc-117752 (A), mouse FARP2 transfected 293T: sc-110246 (B) and 3T3-L1 (C) whole cell lysates.



FARP2 (H-9): sc-390744. Western blot analysis of FARP2 expression in SJRH30 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Elbediwy, A., et al. 2019. The Rho-family GEF FARP2 is activated by aPKC ϵ to control polarity and tight junction formation. *J. Cell Sci.* 132: jcs223743.
2. Libanje, F., et al. 2019. ROCK2 inhibition triggers the collective invasion of colorectal adenocarcinomas. *EMBO J.* 38: e99299.

STORAGE

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