SANTA CRUZ BIOTECHNOLOGY, INC.

FARP2 (D-5): sc-377011

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 two 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. 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.
3. 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.
4. Toyofuku, T., et al. 2005. FARP2 triggers signals for Sema3A-mediated axonal repulsion. Nat. Neurosci. 8: 1712-1719.
5. Felder, B., et al. 2009. FARP2, HDLBP and PASK are downregulated in a patient with autism and 2q37.3 deletion syndrome. Am. J. Med. Genet. A 149A: 952-959.
6. Zhuang, B., et al. 2009. FARP1 promotes the dendritic growth of spinal motor neuron subtypes through transmembrane Semaphorin6A and PlexinA4 signaling. Neuron 61: 359-372.
7. Takegahara, N., et al. 2010. Integral roles of a guanine nucleotide exchange factor, FARP2, in osteoclast podosome rearrangements. FASEB J. 24: 4782-4792.

CHROMOSOMAL LOCATION

Genetic locus: Farp2 (mouse) mapping to 1 D.

SOURCE

FARP2 (D-5) is a mouse monoclonal antibody raised against amino acids 428-552 mapping within an internal region of FARP2 of mouse 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.

STORAGE

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

APPLICATIONS

FARP2 (D-5) is recommended for detection of FARP2 of mouse 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), immunohistochemistry (including paraffin-embedded sections) (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 (m): sc-145072, FARP2 shRNA Plasmid (m): sc-145072-SH and FARP2 shRNA (m) Lentiviral Particles: sc-145072-V.

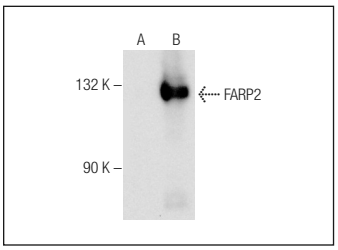
Molecular Weight of FARP2 isoforms: 120/73 kDa.

Positive Controls: FARP2 (m): 293T Lysate: sc-110246.

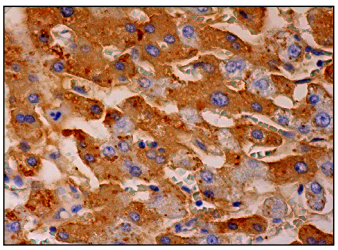
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



FARP2 (D-5): sc-377011. Western blot analysis of FARP2 expression in non-transfected: sc-117752 (**A**) and mouse FARP2 transfected: sc-110246 (**B**) 293T whole cell lysates.



FARP2 (D-5): sc-377011. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes.

RESEARCH USE

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

PROTOCOLS

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