

FRRS1L (H-8): sc-398692

BACKGROUND

AMPA (α -amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid) receptor is a non-NMDA-type ionotropic transmembrane glutamate receptor that mediates fast synaptic transmission in the central nervous system (CNS). FRRS1L (ferric-chelate reductase 1-like), also known as brain protein CG-6 or C9orf4, is a 344 amino acid single-pass membrane protein that is primarily expressed in adult and fetal brain and is weakly expressed in spinal cord, adult ovary and medulla. FRRS1L is a component of the outer core of AMPAR complex. Auxiliary subunits control the gating properties and surface trafficking of the AMPAR complex and impact their biogenesis and protein processing. FRRS1L consist of one DOMON domain and is encoded by a gene located on human chromosome 9q31.3.

REFERENCES

1. Honoré, T., et al. 1982. The binding of [3 H]AMPA, a structural analogue of glutamic acid, to rat brain membranes. *J. Neurochem.* 38: 173-178.
2. Brinkmeier, H., et al. 1987. Activators of protein kinase C induce myotonia by lowering chloride conductance in muscle. *Biochem. Biophys. Res. Commun.* 148: 1383-1389.
3. Perkinton, M.S., et al. 1999. Ca^{2+} -permeable AMPA receptors induce phosphorylation of cAMP response element-binding protein through a phosphatidylinositol 3-kinase-dependent stimulation of the mitogen-activated protein kinase signaling cascade in neurons. *J. Neurosci.* 19: 5861-5874.

CHROMOSOMAL LOCATION

Genetic locus: FRRS1L (human) mapping to 9q31.3; Frs1l (mouse) mapping to 4 B3.

SOURCE

FRRS1L (H-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 229-264 within an internal region of FRRS1L of human origin.

PRODUCT

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

FRRS1L (H-8) is available conjugated to agarose (sc-398692 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398692 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398692 PE), fluorescein (sc-398692 FITC), Alexa Fluor[®] 488 (sc-398692 AF488), Alexa Fluor[®] 546 (sc-398692 AF546), Alexa Fluor[®] 594 (sc-398692 AF594) or Alexa Fluor[®] 647 (sc-398692 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-398692 AF680) or Alexa Fluor[®] 790 (sc-398692 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398692 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

FRRS1L (H-8) is recommended for detection of FRRS1L of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for FRRS1L siRNA (h): sc-92770, FRRS1L shRNA Plasmid (h): sc-92770-SH and FRRS1L shRNA (h) Lentiviral Particles: sc-92770-V.

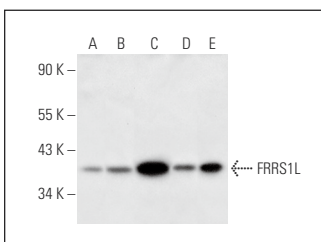
Molecular Weight of FRRS1L: 37 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

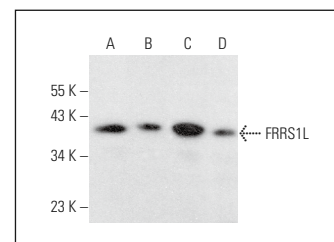
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



FRRS1L (H-8): sc-398692. Western blot analysis of FRRS1L expression in ACHN (A), Hep G2 (B), Jurkat (C), HeLa (D) and K-562 (E) whole cell lysates.



FRRS1L (H-8): sc-398692. Western blot analysis of FRRS1L expression in SH-SY5Y (A), MOLT-4 (B), IMR-32 (C) and Neuro-2A (D) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Han, W., et al. 2017. Ferric chelate reductase 1 like protein (FRRS1L) associates with Dynein vesicles and regulates glutamatergic synaptic transmission. *Front. Mol. Neurosci.* 10: 402.
2. Pilotto, F., et al. 2023. Early molecular layer interneuron hyperactivity triggers Purkinje neuron degeneration in SCA1. *Neuron* 111: 2523-2543.e10.

STORAGE

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

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