4.1B (B-6): sc-398089

BACKGROUND

The 4.1 gene family encodes a group of multifunctional cytoskeletal proteins (4.1R, 4.1G, 4.1N and 4.1B), which are predominantly expressed in the nervous system. 4.1G is a protein that stabilizes spectrin-actin interactions and is associated with hereditary elliptocytosis. Red blood cell 4.1, designated 4.1R, is a multifunctional protein that is essential for maintaining erythrocyte shape and membrane mechanical properties. Both 4.1R and 4.1G are distributed in a unique pattern in the cerebellum and are believed to modulate the membrane mechanical properties of neuronal cells by promoting fodrin/actin association. 4.1N and 4.1B, designated EPB41L1 and EPB41L3, respectively, are strongly expressed in the brain. Antibodies to 4.1N have been reported to detect multiple forms, each enriched in postsynaptic density preparations relative to brain homogenate. Antibodies to 4.1B have been reported to detect two forms.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: EPB41L3 (human) mapping to 18p11.31; Ebpb41l3 (mouse) mapping to 17 E1.3.

SOURCE

4.1B (B-6) is a mouse monoclonal antibody raised against amino acids 654-810 mapping near the C-terminus of 4.1B of mouse origin.

PRODUCT

Each vial contains 200 µg IgG2b 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

4.1B (B-6) is recommended for detection of 4.1B 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 4.1B siRNA (h): sc-40291, 4.1B siRNA (m): sc-40292, 4.1B shRNA Plasmid (h): sc-40291-SH, 4.1B shRNA Plasmid (m): sc-40292-SH, 4.1B shRNA (h) Lentiviral Particles: sc-40291-V and 4.1B shRNA (m) Lentiviral Particles: sc-40292-V.

Molecular Weight of 4.1B: 108 kDa.

Positive Controls: Neuro-2A whole cell lysate: sc-364185, Hep G2 cell lysate: sc-2227 or HEL 92.1.7 cell lysate: sc-2270.

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, TBS Blotto A Blocking Reagent: sc-2333 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

4.1B (B-6): sc-398089. Western blot analysis of 4.1B expression in Neuro-2A (A) and HEL 92.1.7 (B) whole cell lysates.

4.1B (B-6): sc-398089. Western blot analysis of 4.1B expression in Neuro-2A (A) and HEL 92.1.7 (B) whole cell lysates.

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.