

Presenilin 2 (B-7): sc-393758

BACKGROUND

A novel protein, designated Presenilin 1 (also designated S182) and mapping to the AD3 locus of chromosome 14q24.2, has been described. Mutations in PSEN1, the gene encoding Presenilin 1, have been found in families suffering from early-onset Alzheimer's disease. A highly related protein, designated Presenilin 2 (also designated STM2), shares 80% amino acid sequence identity with Presenilin 1. Presenilin 1 and 2 have similar structures and represent novel members of the seven-pass transmembrane receptor superfamily. Point mutations in the gene encoding Presenilin 2 have been found in Volga German families who suffer from an inherited form of early-onset Alzheimer's disease. Whether these proteins function as ligand-gated ion channels or G protein-coupled receptors has yet to be resolved. ALG-3, the mouse homolog of human Presenilin 2, has been cloned from the mouse liver cDNA library.

REFERENCES

1. Bird, T.D., et al. 1988. Familial Alzheimer's disease in American descendants of the Volga Germans: probable genetic founder effect. *Ann. Neurol.* 23: 25-31.
2. Sherrington, R., et al. 1995. Cloning of a gene bearing missense mutations in early-onset familial Alzheimer's disease. *Nature* 375: 754-760.
3. Alzheimer's Disease Collaborative Group. 1995. The structure of the Presenilin 1 (S182) gene and identification of six novel mutations in early onset AD families. *Nat. Genet.* 11: 219-222.
4. Levy-Lahad, E., et al. 1995. Candidate gene for the chromosome 1 familial Alzheimer's disease locus. *Science* 269: 973-977.
5. Rogaeve, E.I., et al. 1995. Familial Alzheimer's disease in kindreds with missense mutations in a gene on chromosome 1 related to the Alzheimer's disease type 3 gene. *Nature* 376: 775-778.

CHROMOSOMAL LOCATION

Genetic locus: PSEN2 (human) mapping to 1q42.13; Psen2 (mouse) mapping to 1 H4.

SOURCE

Presenilin 2 (B-7) is a mouse monoclonal antibody raised against amino acids 1-76 of Presenilin 2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Presenilin 2 (B-7) is available conjugated to agarose (sc-393758 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393758 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393758 PE), fluorescein (sc-393758 FITC), Alexa Fluor[®] 488 (sc-393758 AF488), Alexa Fluor[®] 546 (sc-393758 AF546), Alexa Fluor[®] 594 (sc-393758 AF594) or Alexa Fluor[®] 647 (sc-393758 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-393758 AF680) or Alexa Fluor[®] 790 (sc-393758 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Presenilin 2 (B-7) is recommended for detection of Presenilin 2 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 Presenilin 2 siRNA (h): sc-36314, Presenilin 2 siRNA (m): sc-36315, Presenilin 2 shRNA Plasmid (h): sc-36314-SH, Presenilin 2 shRNA Plasmid (m): sc-36315-SH, Presenilin 2 shRNA (h) Lentiviral Particles: sc-36314-V and Presenilin 2 shRNA (m) Lentiviral Particles: sc-36315-V.

Molecular Weight of Presenilin 2 holoprotein: 50 kDa.

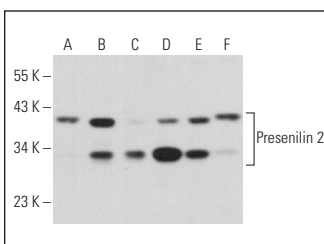
Molecular Weight of aggregated Presenilin 2: 50-250 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, Ramos cell lysate: sc-2216 or MOLT-4 cell lysate: sc-2233.

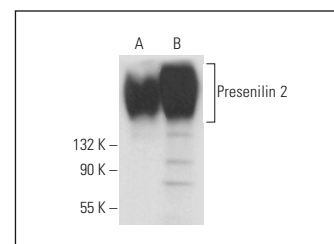
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-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-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



Presenilin 2 (B-7): sc-393758. Western blot analysis of Presenilin 2 expression in PC-12 (A), Neuro-2A (B), J774.A1 (C), Ramos (D), MOLT-4 (E) and A-10 (F) whole cell lysates.



Presenilin 2 (B-7): sc-393758. Western blot analysis of Presenilin 2 expression in rat brain (A) and mouse postnatal brain (B) tissue extracts. Detection reagent used: m-IgGλ BP-HRP (Cruz Marker): sc-516132-CM.

STORAGE

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

RESEARCH USE

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