

Septin 6 (B-8): sc-514781

BACKGROUND

Septin 6, also known as SEPT6, is a 434 amino acid protein that belongs to the septin family. The highly conserved septin family of GTP-binding cytoskeletal proteins is implicated in membrane transport, apoptosis, cell polarity, cell cycle regulation, cytokinesis and other cellular functions. Septins polymerize into heterooligomeric protein complexes that form filaments, and can associate with cellular membranes, Actin filaments and microtubules. Filaments are assembled from asymmetrical heterotrimers, composed of Septin 2, Septin 6 and Septin 7 that associate head-to-head to form a hexameric unit, however interaction with Septin 12 alters filament structure. Septin 6 shares 40% identity with CDC10 and contains an ATP/GTP-binding site motif. The Septin 6 protein demonstrates nearly ubiquitous expression, with highest level in thymus. The Septin 6 protein is phosphorylated upon DNA damage, probably by Atm or ATR. Existing as four alternatively spliced isoforms, the Septin 6 gene is conserved in canine, bovine, mouse, rat, chicken, zebrafish and fruit fly, and maps to human chromosome X.

REFERENCES

1. Kinoshita, A., et al. 1998. Identification of septins in neurofibrillary tangles in Alzheimer's disease. *Am. J. Pathol.* 153: 1551-1560.
2. Xue, J., et al. 2000. Phosphorylation of a new brain-specific septin, G-Septin, by cGMP-dependent protein kinase. *J. Biol. Chem.* 275: 10047-10056.
3. Toda, S., et al. 2000. Reciprocal expression of infant- and adult-preferring transcripts of CDCREL1 septin gene in the rat neocortex. *Biochem. Biophys. Res. Commun.* 273: 723-728.
4. Jackisch, B.O., et al. 2000. Alternative exon usage of rat septins. *Biochem. Biophys. Res. Commun.* 275: 180-188.

CHROMOSOMAL LOCATION

Genetic locus: SEPT6 (human) mapping to Xq24; Sept6 (mouse) mapping to X A3.3.

SOURCE

Septin 6 (B-8) is a mouse monoclonal antibody raised against amino acids 365-424 of Septin 6 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.

Septin 6 (B-8) is available conjugated to agarose (sc-514781 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514781 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514781 PE), fluorescein (sc-514781 FITC), Alexa Fluor® 488 (sc-514781 AF488), Alexa Fluor® 546 (sc-514781 AF546), Alexa Fluor® 594 (sc-514781 AF594) or Alexa Fluor® 647 (sc-514781 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514781 AF680) or Alexa Fluor® 790 (sc-514781 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Septin 6 (B-8) is recommended for detection of Septin 6 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 Septin 6 siRNA (h): sc-40938, Septin 6 siRNA (m): sc-40939, Septin 6 shRNA Plasmid (h): sc-40938-SH, Septin 6 shRNA Plasmid (m): sc-40939-SH, Septin 6 shRNA (h) Lentiviral Particles: sc-40938-V and Septin 6 shRNA (m) Lentiviral Particles: sc-40939-V.

Molecular Weight of Septin 6: 50 kDa.

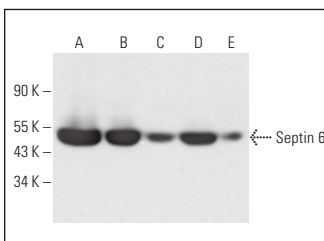
Positive Controls: NTERA-2 cl.D1 whole cell lysate: sc-364181, CCRF-CEM cell lysate: sc-2225 or MOLT-4 cell lysate: sc-2233.

RECOMMENDED SUPPORT REAGENTS

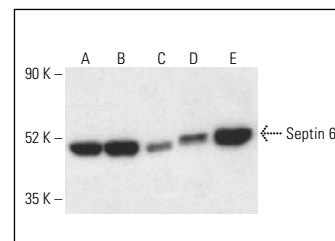
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-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



Septin 6 (B-8): sc-514781. Western blot analysis of Septin 6 expression in CCRF-CEM (A), MOLT-4 (B), HeLa (C) and NTERA-2 cl.D1 (D) whole cell lysates and human testis tissue extract (E).



Septin 6 (B-8) HRP: sc-514781 HRP. Direct western blot analysis of Septin 6 expression in MOLT-4 (A), Jurkat (B), K-562 (C), HeLa (D) and CCRF-CEM (E) whole cell lysates.

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.

PROTOCOLS

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