

Septin 6 (H-60): sc-20180

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 dog, cow, 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. Larisch, S., et al. 2000. A novel mitochondrial septin-like protein, ARTS, mediates apoptosis dependent on its P-loop motif. *Nat. Cell Biol.* 2: 915-921.
4. Toda, S., et al. 2000. Reciprocal expression of infant- and adult-preferring transcripts of CDCREL-1 septin gene in the rat neocortex. *Biochem. Biophys. Res. Commun.* 273: 723-728.
5. 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 (H-60) is a rabbit polyclonal antibody raised against amino acids 365-424 of Septin 6 of human origin.

PRODUCT

Each vial contains 200 µg IgG 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

Septin 6 (H-60) is recommended for detection of Septin 6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

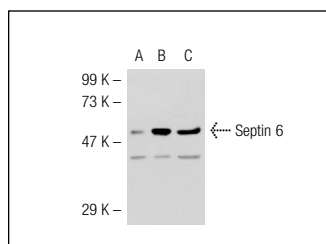
Septin 6 (H-60) is also recommended for detection of Septin 6 in additional species, including equine, canine, bovine, porcine and avian.

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.

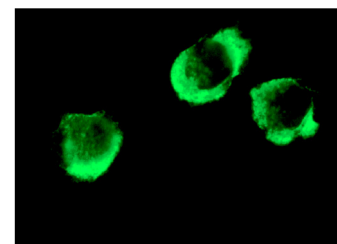
Molecular Weight of Septin 6: 50 kDa.

Positive Controls: Septin 6 (m): 293T Lysate: sc-123462, HeLa whole cell lysate: sc-2200 or MOLT-4 cell lysate: sc-2233.

DATA



Septin 6 (H-60): sc-20180. Western blot analysis of Septin 6 expression in non-transfected 293T: sc-117752 (A), mouse Septin 6 transfected 293T: sc-123462 (B) and HeLa (C) whole cell lysates.



Septin 6 (H-60): sc-20180. Immunofluorescence staining of methanol-fixed CCRF-CEM cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Maimaitiyiming, M., et al. 2008. Biochemical characterization of membrane-associated Septin from rat brain. *J. Neurochem.* 106: 1175-1183.
2. Menon, M.B., et al. 2014. Genetic deletion of SEPT7 reveals a cell type-specific role of septins in microtubule destabilization for the completion of cytokinesis. *PLoS Genet.* 10: e1004558.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **Septin 6 (B-10): sc-514806** or **Septin 6 (B-8): sc-514781**, our highly recommended monoclonal alternatives to Septin 6 (H-60).