SANTA CRUZ BIOTECHNOLOGY, INC.

Septin 8 (G-12): sc-514436

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Septins are members of a conserved family of cytoskeletal GTPases, specifically belonging to the large superclass of P-loop GTPases. Septin proteins form homo- and hetero-oligomeric polymers that accumulate into higher-order filaments which may function as dynamic protein scaffolds. Septins play an important role in vesicle trafficking, apoptosis, cytoskeleton remodeling, infection, neurodegeneration, neoplasia and cytokinesis. Septin 8 is a 508 amino acid protein that is expressed in the brain, cardiovascular regions, prostate, testis and ovary. Septin 8 interacts with both Septin 5 and cell division cycle related-1 (CDCrel-1). Septin 8 may play an important role in the functional regulation of hPFTAIRE1, a member of the Cdc2-related kinase family that is localized in cytoplasm. Septin 8, Septin 4 and Septin 5 surround α-granules, implicating these three septins as components of the septin complex in platelets and contributing to platelet biology.

REFERENCES

1. Nagase, T., et al. 1996. Prediction of the coding sequences of unidentified human genes. VI. The coding sequences of 80 new genes (KIAA0201-KIAA0280) deduced by analysis of cDNA clones from cell line KG-1 and brain. DNA Res. 3: 321-329, 341-354.
2. Sudbery, P.E. 2001. The germ tubes of *Candida albicans* hyphae and pseudohyphae show different patterns of septin ring localization. Mol. Microbiol. 41: 19-31.
3. Yang, T., et al. 2002. KIAA0202, a human septin family member, interacting with hPFTAIRE1. Sheng Wu Hua Xue Yu Sheng Wu Wu Li Xue Bao 34: 520-525.
4. Castillon, G.A., et al. 2003. Septins have a dual role in controlling mitotic exit in budding yeast. Curr. Biol. 13: 654-658.
5. Longtine, M.S. and Bi, E. 2003. Regulation of septin organization and function in yeast. Trends Cell Biol. 13: 403-409.
6. Bläser, S., et al. 2004. The novel human platelet septin Septin 8 is an interaction partner of Septin 4. Thromb. Haemost. 91: 959-966.

CHROMOSOMAL LOCATION

Genetic locus: SEPT8 (human) mapping to 5q31.1.

SOURCE

Septin 8 (G-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1-20 at the N-terminus of Septin 8 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-514436 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Septin 8 (G-12) is recommended for detection of Septin 8 of 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 8 siRNA (h): sc-61530, Septin 8 shRNA Plasmid (h): sc-61530-SH and Septin 8 shRNA (h) Lentiviral Particles: sc-61530-V.

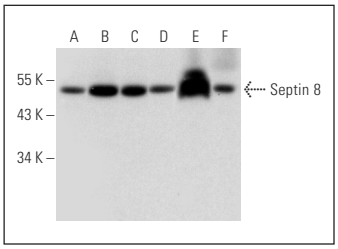
Molecular Weight of Septin 8: 50 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HeLa whole cell lysate: sc-2200 or human brain hippocampus extract: sc-364375.

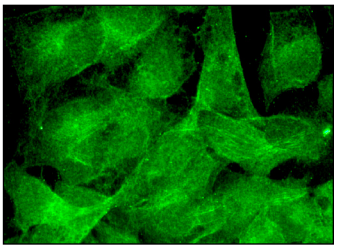
RECOMMENDED SUPPORT REAGENTS

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, 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-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 8 (G-12): sc-514436. Western blot analysis of Septin 8 expression in HeLa (**A**), T24 (**B**), K-562 (**C**) and NTERA-2 cl.D1 (**D**) whole cell lysates and human hippocampus (**E**) and human testis (**F**) tissue extracts.



Septin 8 (G-12): sc-514436. Immunofluorescence staining of formalin-fixed Hep G2 cells showing membrane and cytoplasmic localization.

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.