

myomegalin (S-17): sc-100921

BACKGROUND

Myomegalin, also known as PDE4DIP (phosphodiesterase 4D-interacting protein), CMYA2 (cardiomyopathy-associated protein 2) or MMGL, is a 2,346 amino acid protein that contains one NBPF domain and localizes to the nucleus, cytoplasm, centrosome and Golgi apparatus. Expressed at high levels in fetal and adult heart and at lower levels in brain and placenta, myomegalin is thought to function as an anchoring protein that sequesters members of the cAMP-dependent pathway to the Golgi and to centrosomes, thereby mediating cAMP pathway dynamics. Translocations in the gene that encodes myomegalin are associated with myeloproliferative disorders (MBDs), a group of diseases caused by an overproduction of blood cells. Myomegalin exists as twelve isoforms due to alternative splicing events.

REFERENCES

1. Soejima, H., et al. 2001. Isolation of novel heart-specific genes using the BodyMap database. *Genomics* 74: 115-120.
2. Verde, I., et al. 2001. Myomegalin is a novel protein of the Golgi/centrosome that interacts with a cyclic nucleotide phospho-diesterase. *J. Biol. Chem.* 276: 11189-11198.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608117. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Wilkinson, K., et al. 2003. Cloning of the t(1;5) (q23;q33) in a myeloproliferative disorder associated with eosinophilia: involvement of PDGFRB and response to imatinib. *Blood* 102: 4187-4190.
5. Bond, J., et al. 2006. Cytoskeletal genes regulating brain size. *Curr. Opin. Cell Biol.* 18: 95-101.
6. Osadchii, O.E. 2007. Myocardial phosphodiesterases and regulation of cardiac contractility in health and cardiac disease. *Cardiovasc. Drugs Ther.* 21: 171-194.

CHROMOSOMAL LOCATION

Genetic locus: PDE4DIP (human) mapping to 1q21.1.

SOURCE

myomegalin (S-17) is a mouse monoclonal antibody raised against recombinant myomegalin of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} 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.

PROTOCOLS

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

APPLICATIONS

myomegalin (S-17) is recommended for detection of myomegalin of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000), immunoprecipitation [1-2 µl per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:2500) and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:100-1:5000).

Suitable for use as control antibody for myomegalin siRNA (h): sc-75849, myomegalin shRNA Plasmid (h): sc-75849-SH and myomegalin shRNA (h) Lentiviral Particles: sc-75849-V.

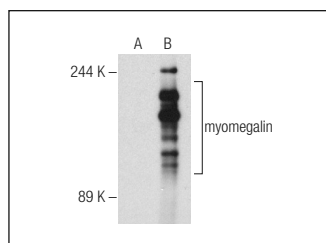
Molecular Weight of myomegalin: 265 kDa.

Positive Controls: myomegalin (h): 293T Lysate: sc-372427 or JAR cell lysate: sc-2276.

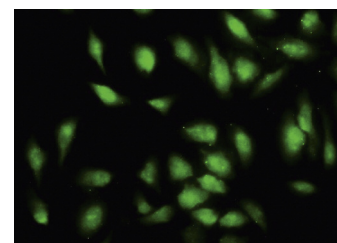
RECOMMENDED SUPPORT REAGENTS

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



myomegalin (S-17): sc-100921. Western blot analysis of myomegalin expression in non-transfected: sc-117752 (A) and human myomegalin transfected: sc-372427 (B) 293T whole cell lysates.



myomegalin (S-17): sc-100921. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear and cytoplasmic localization.

RESEARCH USE

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