

MIPOL1 (F-18): sc-107745

BACKGROUND

MIPOL1 (mirror-image polydactyly gene 1 protein) is a 442 amino acid protein that is expressed very weakly in skeletal muscle, heart, pancreas, kidney, liver and fetal kidney. Defects in the gene encoding MIPOL1 cause mirror-image polydactyly of hands and feet, a congenital anomaly that is characterized by mirror image duplication of digits. The MIPOL gene has also been implicated in a translocation event in which it rearranges with the PITX2 gene, resulting in a phenotype of mild craniofacial and acallosal central nervous system mid-line defects. Down-regulation of MIPOL1 expression is observed in a high percentage of nasopharyngeal carcinomas, suggesting that MIPOL1 is a tumor suppressor. There are three isoforms of MIPOL1 that are expressed as a result of alternative splicing events.

REFERENCES

1. Kondoh, S., et al. 2002. A novel gene is disrupted at a 14q13 breakpoint of t(2;14) in a patient with mirror-image polydactyly of hands and feet. *J. Hum. Genet.* 47: 136-139.
2. Kamnasaran, D., et al. 2003. Rearrangement in the PITX2 and MIPOL1 genes in a patient with a t(4;14) chromosome. *Eur. J. Hum. Genet.* 11: 315-324.
3. Online Mendelian Inheritance in Man, OMIM[™]. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 606850. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Omi, M., et al. 2005. Studies on epidermal growth factor receptor signaling in vertebrate limb patterning. *Dev. Dyn.* 233: 288-300.
5. Cheung, A.K., et al. 2009. Chromosome 14 transfer and functional studies identify a candidate tumor suppressor gene, mirror image polydactyly 1, in nasopharyngeal carcinoma. *Proc. Natl. Acad. Sci. USA* 106: 14478-14483.

CHROMOSOMAL LOCATION

Genetic locus: Mipol1 (mouse) mapping to 12 C1.

SOURCE

MIPOL1 (F-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of MIPOL1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-107745 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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 or our catalog for detailed protocols and support products.

APPLICATIONS

MIPOL1 (F-18) is recommended for detection of MIPOL1 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 MIPOL1 siRNA (m): sc-149439, MIPOL1 shRNA Plasmid (m): sc-149439-SH and MIPOL1 shRNA (m) Lentiviral Particles: sc-149439-V.

Molecular Weight of MIPOL1: 52 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

RESEARCH USE

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