

Midline-1 (S-19): sc-55248

BACKGROUND

Midline-1 (tripartite motif-containing protein 18, putative transcription factor XPRF, RING finger protein 59) is a 667 amino acid protein encoded by the human gene MID1. Midline-1 belongs to the TRIM/RBCC family and contains two B-box-type zinc fingers, one B30.2/SPRY domain, one COS domain, one Fibronectin type III domain and one RING-type zinc finger. Midline-1 is believed to have E3 ubiquitin ligase activity which targets the catalytic subunit of protein phosphatase 2 for degradation. It is a cytoplasmic protein found as a homodimer or heterodimer with Midline-2. It also interacts with IGBP1 (lymphocyte signaling protein A4). Defects in MID1 are the cause of Opitz syndrome type I (OS-I). OS-I is an X-linked recessive disorder characterized by hypertelorism, genital-urinary defects such as hypospadias in males and splayed labia in females, lip-palate-laryngotracheal clefts, imperforate anus, developmental delay and congenital heart defects. OS-I mutations produce proteins with a decreased affinity for microtubules.

REFERENCES

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- Buchner, G., et al. 1999. MID2, a homologue of the Opitz syndrome gene MID1: similarities in subcellular localization and differences in expression during development. *Hum. Mol. Genet.* 8: 1397-1407.
- Schweiger, S., et al. 1999. The Opitz syndrome gene product, MID1, associates with microtubules. *Proc. Natl. Acad. Sci. USA* 96: 2794-2799.
- Trockenbacher, A., et al. 2001. MID1, mutated in Opitz syndrome, encodes a ubiquitin ligase that targets phosphatase 2A for degradation. *Nat. Genet.* 29: 287-294.
- Short, K.M., et al. 2002. MID1 and MID2 homo- and heterodimerise to tether the Rapamycin-sensitive PP2A regulatory subunit, $\alpha 4$, to microtubules: implications for the clinical variability of X-linked Opitz GBBB syndrome and other developmental disorders. *BMC Cell Biol.* 3: 1.

CHROMOSOMAL LOCATION

Genetic locus: MID1 (human) mapping to Xp22.

SOURCE

Midline-1 (S-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Midline-1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-55248 P, (100 μ g 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.

APPLICATIONS

Midline-1 (S-19) is recommended for detection of Midline-1 of human and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Midline-1 (S-19) is also recommended for detection of Midline-1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Midline-1 siRNA (h): sc-62614, Midline-1 shRNA Plasmid (h): sc-62614-SH and Midline-1 shRNA (h) Lentiviral Particles: sc-62614-V.

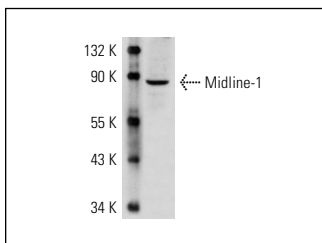
Molecular Weight of Midline-1: 75 kDa.

Positive Controls: JAR cell lysate: sc-2276.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Midline-1 (S-19): sc-55248. Western blot analysis of Midline-1 expression in JAR whole cell lysate.

RESEARCH USE

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

MONOS
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Try **Midline-1 (2C11): sc-293353**, our highly recommended monoclonal alternative to Midline-1 (S-19).