

MIS (L-18): sc-34835

BACKGROUND

The transforming growth factor β (TGF β) superfamily is composed of numerous growth and differentiation factors, including TGF β 1-3, Mullerian inhibiting substance (MIS), growth/differentiation factor (GDF) 1-9, bone morphogenic protein (BMP) 2-8, glial cell line-derived neurotrophic factor (GDNF), Inhibin α , β -A, β -B and β -C, Lefty and Nodal. Members of the TGF β superfamily are involved in embryonic development and adult tissue homeostasis. The MIS glycoprotein is produced by the sertoli cells of the testis. Fetal testes produce both MIS and testosterone, the presence of which result in male offspring. Absence of MIS and testosterone in a developing fetus results in the induction of Mullerian duct differentiation, and Wolffian duct development is not induced. Testosterone induces the differentiation of the Wolffian ducts, whereas MIS causes regression of the Mullerian duct. MIS inhibits the growth of tumors derived from tissues of Mullerian duct origin. MIS can also inhibit the autophosphorylation of the EGF receptor *in vitro*. Defects in anti-Muellerian hormone are the cause of persistent Mullerian duct syndrome type I (PMDS-1). PMDS-1 is a form of male pseudohermaphroditism characterized by a failure of Mullerian duct regression in otherwise normal males.

REFERENCES

1. Cate, R.L., et al. 1986. Isolation of the bovine and human genes for Mullerian inhibiting substance and expression of the human gene in animal cells. *Cell* 45: 685-698.
2. Massague, J., et al. 1987. Multiple type- β transforming growth factors and their receptors. *J. Cell. Physiol.* 5: 43-47.
3. Massague, J. 1990. The transforming growth factor- β family. *Annu. Rev. Cell Biol.* 6: 597-641.
4. Gilbert, S.F. 1991. *Developmental Biology*. Sunderland, MA: Sinauer Assoc. Inc., 770-771.
5. Behringer, R.R. 1994. The *in vivo* roles of Mullerian-inhibiting substance. *Curr. Top. Dev. Biol.* 29: 171-187.

CHROMOSOMAL LOCATION

Genetic locus: Amh (mouse) mapping to 10 C1.

SOURCE

MIS (L-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of MIS of mouse 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-34835 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

MIS (L-18) is recommended for detection of precursor and mature MIS of mouse and, to a lesser extent, 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).

Suitable for use as control antibody for MIS siRNA (m): sc-39794, MIS shRNA Plasmid (m): sc-39794-SH and MIS shRNA (m) Lentiviral Particles: sc-39794-V.

Molecular Weight of MIS: 70/74 kDa.

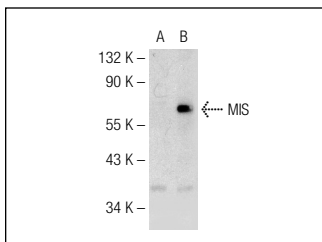
Molecular Weight of unreduced MIS: 140 kDa.

Positive Controls: MIS (m): 293 Lysate: sc-178938.

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



MIS (L-18): sc-34835. Western blot analysis of MIS expression in non-transfected: sc-110760 (A) and mouse MIS transfected: sc-178938 (B) 293 whole cell lysates.

RESEARCH USE

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


 MONOS
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Try **MIS (B-11): sc-166752** or **MIS (B-9): sc-365643**, our highly recommended monoclonal alternatives to MIS (L-18). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **MIS (B-11): sc-166752**.