

MIS (C-20): sc-6886

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 testis 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-mullerian 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.

CHROMOSOMAL LOCATION

Genetic locus: AMH (human) mapping to 19p13.3; Amh (mouse) mapping to 10 C1.

SOURCE

MIS (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of MIS 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-6886 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MIS (C-20) is recommended for detection of precursor and mature MIS of mouse, rat and human 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MIS (C-20) is also recommended for detection of precursor and mature MIS in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MIS siRNA (h): sc-39793, MIS siRNA (m): sc-39794, MIS shRNA Plasmid (h): sc-39793-SH, MIS shRNA Plasmid (m): sc-39794-SH, MIS shRNA (h) Lentiviral Particles: sc-39793-V and MIS shRNA (m) Lentiviral Particles: sc-39794-V.

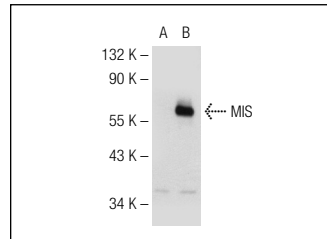
Molecular Weight of MIS: 70/74 kDa

Molecular Weight of unreduced MIS: 140 kDa.

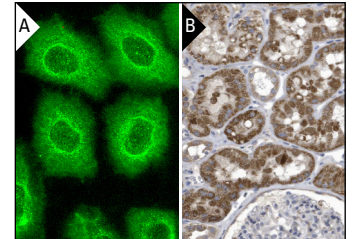
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



MIS (C-20): sc-6886. Western blot analysis of MIS expression in non-transfected: sc-110760 (A) and mouse MIS transfected: sc-178938 (B) 293 whole cell lysates.



MIS (C-20): sc-6886. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

SELECT PRODUCT CITATIONS

- Couse, J.F., et al. 1999. Postnatal sex reversal of the ovaries in mice lacking estrogen receptors α and β . *Science* 286: 2328-2331.
- Kyrönlähti, A., et al. 2010. GATA4 protects granulosa cell tumors from TRAIL-induced apoptosis. *Endocr. Relat. Cancer* 17: 709-717.
- Sarraj, M.A., et al. 2010. Fetal testis dysgenesis and compromised Leydig cell function in Tgfr3 (b glycan) knockout mice. *Biol. Reprod.* 82: 153-162.
- Farhat, A., et al. 2011. Hematopoietic-Prostaglandin D2 synthase through PGD2 production is involved in the adult ovarian physiology. *J. Ovarian Res.* 4: 3.
- Bagheri-Fam, S., et al. 2011. Defective survival of proliferating Sertoli cells and androgen receptor function in a mouse model of the ATR-X syndrome. *Hum. Mol. Genet.* 20: 2213-2224.
- Dadhich, R.K., et al. 2011. Expression of genes controlling testicular development in adult testis of the seasonally breeding iberian mole. *Sex. Dev.* 5: 77-88.
- Nanjappa, M.K., et al. 2012. The industrial chemical bisphenol A (BPA) interferes with proliferative activity and development of steroidogenic capacity in rat Leydig cells. *Biol. Reprod.* 86: 135, 1-12.

RESEARCH USE

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



Try **MIS (B-11): sc-166752** or **MIS (A-9): sc-377140**, our highly recommended monoclonal alternatives to MIS (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **MIS (B-11): sc-166752**.