SANTA CRUZ BIOTECHNOLOGY, INC.

MIS (B-9): sc-365643

BACKGROUND

The transforming growth factor β (TGFβ) superfamily is composed of numerous growth and differentiation factors, including TGFβ1-3, 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 TGFβ superfamily are involved in embryonic development and adult tissue homeostasis. The MIS glycoprotein is produced by the sertoli cells of the testes. 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 Muellerian duct. MIS inhibits the growth of tumors derived from tissues of Muellerian duct origin. MIS can also inhibit the autophosphorylation of the EGF receptor *in vitro*. Defects in anti-Müllerian hormone are the cause of persistent Muellerian duct syndrome type I (PMDS-1). PMDS-1 is a form of male pseudohermaphroditism characterized by a failure of Muellerian duct regression in otherwise normal males.

CHROMOSOMAL LOCATION

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

SOURCE

MIS (B-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 27-51 at the N-terminus of MIS of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-365643 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

MIS (B-9) is recommended for detection of precursor and mature MIS of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 (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.

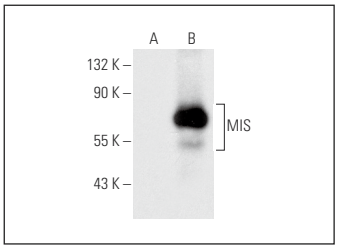
Molecular Weight of unreduced MIS: 140 kDa.

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

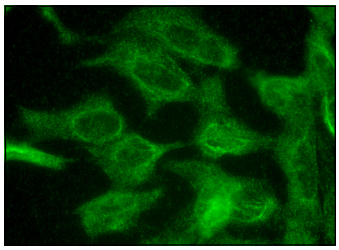
RECOMMENDED SUPPORT REAGENTS

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, UltraCruz® Blocking Reagent: sc-516214 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



MIS (B-9): sc-365643. Western blot analysis of MIS expression in non-transfected: sc-110760 (**A**) and mouse MIS transfected: sc-178938 (**B**) 293 whole cell lysates.



MIS (B-9): sc-365643. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Srisuwatanasagul, K., et al. 2021. Expressions of cytochrome P450 aromatase and anti-Müllerian hormone in testes of fattening pigs by the timing of the first vaccination for immunocastration. Reprod. Domest. Anim. 56: 400-407.
2. Tumurbaatar, T., et al. 2021. Effect of anti-Müllerian hormone on the regulation of pituitary gonadotropin subunit expression: roles of kisspeptin and its receptors in gonadotroph LβT2 cells. Endocr. J. 68: 1091-1100.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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

CONJUGATES

See **MIS (B-11): sc-166752** for MIS antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.