

DESCRIPTION

Species Reactivity	Rat
Specificity	Detects rat MIS RII in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) TGF-β RII, rhTGF-β RIII, recombinant mouse (rm) TGF-β RI, and rmTGF-β RII is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant rat MIS RII Pro19-Pro144 Accession # Q62893
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Blockade of Receptor-ligand Interaction	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Müllerian inhibiting substance (MIS), also named anti-Müllerian hormone (AMH) is a tissue-specific TGF-β superfamily growth factor. Its expression is restricted to fetal testis, plus postnatal testis and ovary (1). MIS induces Mullerian duct (female reproductive tract) regression during sexual differentiation in the male embryo and has been shown to have a regulatory role in gonads postnatally (1). Like other TGF-β superfamily members, MIS signals via a heteromeric receptor complex consisting of a type I and a type II receptor serine/threonine kinase. Depending on the cell context, different type I receptors (including Act RIA/ALK2, BMP RIA/ALK3, and BMP RIB/ALK6) that are shared by other TGF-β superfamily members, can be utilized for MIS signaling (1). In contrast, the type II MIS receptor (MIS RII) is unique and does not bind other TGF-β superfamily members (1, 2). Upon ligand binding, MIS RII recruits the non-ligand binding type I receptor into the complex, resulting in phosphorylation the BMP-like signaling pathway effector proteins Smad1, Smad5 and Smad8 (1).

The gene for rat MIS RII was isolated separately by two groups working from Sertoli cell and fetal ovary cDNA libraries (3, 4). MIS RII comprises a 557 amino acid (aa) residue type I transmembrane protein with a putative 17 aa signal peptide. Mature MIS RII has a 127 aa cysteine-rich extracellular domain containing 2 potential N-glycosylation sites, a 21 aa transmembrane domain, and a 392 aa cytoplasmic region with a serine/threonine kinase domain (3, 4). Rat MIS RII shares 95% and 82% aa sequence identity with the mouse and human homologues, respectively (5). MIS RII is expressed in the mesenchymal cells surrounding the Mullerian ducts during embryonic development. Postnatally, it is expressed in uterine tissues and rodent Leydig cells, and coexpressed with MIS in the testicular Sertoli and ovarian granulosa cells (1, 6). The expression of MIS RII in the Mullerian mesenchyme is regulated by Wnt7a signaling from nearby epithelium through the canonical Wnt pathway. Wnt7a mutant mice do not express MIS RII, and do not experience Mullerian duct regression (7).

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.