Revision 1

#4518 Store at -20C

MIS-R2 Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H	Transfected Only	75-85	Rabbit	#Q16671	269

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

MIS-R2 Antibody detects transfected levels of human MIS-R2 protein.

Species predicted to react based on 100% sequence homology

Monkey

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu315 of human MIS-R2. Antibodies are purified by protein A and peptide affinity chromatography.

Background

The type II receptor for Müllerian inhibiting substance (MIS), also known as the anti-Müllerian hormone receptor 2 (AMHR2), binds a hormone-ligand that directs the incomplete development of Müllerian ducts in male embryos (1,2). MIS-R2 is a single transmembrane serine/threonine kinase receptor of the TGF-β receptor family involved in the phosphorylation of shared type 1 receptors and Smad transcriptional regulators (3,4). MIS produced by the fetal testis promotes the regression of Müllerian ducts that would otherwise differentiate into the uterus and fallopian tubes in the male fetus (5). Corresponding MIS-R2 gene mutations can cause persistent Müllerian duct syndrome type 2 (PMDS-2), a form of male pseudohermaphroditism characterized by a failure of Müllerian duct regression (6). The presence of MIS-R2 is observed in ovarian cancer cell lines that respond positively to treatment with recombinant MIS, suggesting that both receptor and ligand may be important therapeutic tools (7).

Background References

1. Visser, J.A. et al. (1995) *Biochem Biophys Res Commun* 215, 1029-36.
2. di Clemente, N. et al. (1994) *Mol Endocrinol* 8, 1006-20.
3. Teixeira, J. et al. (1996) *Endocrinology* 137, 160-5.
4. Gouédard, L. et al. (2000) *J Biol Chem* 275, 27973-8.
5. Jamin, S.P. et al. (2002) *Nat Genet* 32, 408-10.
6. Imbeaud, S. et al. (1996) *Hum Mol Genet* 5, 1269-77.
7. Masiakos, P.T. et al. (1999) *Clin Cancer Res* 5, 3488-99.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human

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Limited Uses

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