Revision 1

#13856 Store at -20C

PGRMC1 (D6M5M) XP® Rabbit mAb

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:
WB, IP, IHC-P, IF-IC	H M R Mk	Endogenous	25	Rabbit IgG	#O00264	10857

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
Immunohistochemistry (Paraffin)	1:200
Immunofluorescence (Immunocytochemistry)	1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

Specificity / Sensitivity

PGRMC1 (D6M5M) XP® Rabbit mAb recognizes endogenous levels of total PGRMC1 protein. This antibody does not cross-react with PGRMC2 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human PGRMC1 protein.

Background

The progesterone receptor membrane component 1 (PGRMC1, Hpr6.6) was originally identified as a component of a progesterone-binding protein complex that also contains plasminogen activator inhibitor 1 RNA binding protein (PAIRBP1, SERBP1) (1,2). The structure of PGRMC1 protein includes a single transmembrane region and a carboxy-terminal cytochrome b5 heme-binding domain (3,4). Research studies confirm that PGRMC1 binds heme as well as binding and regulating cytochrome P450 enzymes responsible for the metabolism of clinical drugs and endogenous signaling molecules (5-7). While early research studies were equivocal on the ability of PGRMC1 to bind progesterone, studies using PGRMC1-fusion proteins clearly demonstrate that PGRMC1 binds progesterone with high affinity (2,8). Studies detailing expression of PGRMC1 in granulosa cells suggest that PGRMC1 mediates the anti-apoptotic actions of progesterone and that this protein is part of a signal transduction pathway that regulates granulosa cell function (9).

Background References

1. Cahill, M.A. (2007) *J Steroid Biochem Mol Biol* 105, 16-36.
2. Peluso, J.J. et al. (2008) *Endocrinology* 149, 534-43.
3. Gerdes, D. et al. (1998) *Biol Chem* 379, 907-11.
4. Mifsud, W. and Bateman, A. (2002) *Genome Biol* 3, RESEARCH0068.
5. Crudden, G. et al. (2006) *J Pharmacol Exp Ther* 316, 448-55.
6. Hughes, A.L. et al. (2007) *Cell Metab* 5, 143-9.
7. Oda, S. et al. (2011) *Drug Metab Dispos* 39, 2057-65.
8. Peluso, J.J. et al. (2009) *J Clin Endocrinol Metab* 94, 2644-9.
9. Peluso, J.J. (2013) *Front Neurosci* 7, 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

WB: Western Blotting **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin)
IF-IC: Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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