Revision 1

Store at -20C

#5388

RXRα 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 R Mk	Endogenous	53	Rabbit	#P19793	6256

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100

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

RXRα Antibody recognizes endogenous levels of total RXRα protein. RXRα Antibody does not cross-react with either RXRβ or RXRγ.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human RXRα protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

The human retinoid X receptors (RXRs) are encoded by three distinct genes (*RXR*α, *RXR*β, and *RXR*γ) and bind selectively and with high affinity to the vitamin A derivative, 9-*cis*-retinoic acid. RXRs are type-II nuclear hormone receptors that are largely localized to the nuclear compartment independent of ligand binding. Nuclear RXRs form heterodimers with nuclear hormone receptor subfamily 1 proteins, including thyroid hormone receptor, retinoic acid receptors, vitamin D receptor, peroxisome proliferator-activated receptors, liver X receptors, and farnesoid X receptor (1). Since RXRs heterodimerize with multiple nuclear hormone receptors, they play a central role in transcriptional control of numerous hormonal signaling pathways by binding to *cis*-acting response elements in the promoter/enhancer region of target genes (2).
Retinoid X receptor α (RXRα) is the founding RXR family member and is predominantly expressed in liver, kidney, epidermis, intestine and a variety of tissues (2-4). Knockout of the murine *rxr*α gene results in embryonic lethality tentatively due to myocardial hypoplasia, which demonstrates the importance of RXRα to retinoid signaling *in vivo* (5,6). Biochemical evidence suggests that RXRα transcriptional activity is post-translationally regulated through the Ras-Raf-MAPK signaling cascade. MAPK-dependent phosphorylation of RXRα directly abrogates the ability of RXRα to associate with nuclear receptor coactivators (7).

Background References

1. Gronemeyer, H. et al. (2004) *Nat Rev Drug Discov* 3, 950-64.
2. Mangelsdorf, D.J. et al. (1992) *Genes Dev* 6, 329-44.
3. Mangelsdorf, D.J. et al. (1990) *Nature* 345, 224-9.
4. Dollé, P. et al. (1994) *Mech Dev* 45, 91-104.
5. Kastner, P. et al. (1994) *Cell* 78, 987-1003.
6. Sucov, H.M. et al. (1994) *Genes Dev* 8, 1007-18.
7. Macoritto, M. et al. (2008) *J Biol Chem* 283, 4943-56.

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 **R:** Rat **Mk:** Monkey

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Limited Uses

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