Revision 4

Store at -20C

#62294

RARα (E6Z6K) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, ChIP	H M Mk	Endogenous	60	Rabbit IgG	#P10276	5914

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100
Chromatin IP	1:50

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

RARα (E6Z6K) Rabbit mAb recognizes endogenous levels of total RARα protein. This antibody weakly detects RARγ when it is overexpressed.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu220 of human RARα protein.

Background

Retinoids (vitamin A and its active retinoic acid derivatives) are non-steroid hormones that regulate cell proliferation, differentiation and apoptosis. Retinoic acid receptors (RARalpha, -beta and -gamma) and retinoid X receptors (RXRalpha, -beta and -gamma) are nuclear receptors that function as RAR-RXR heterodimers or RXR homodimers (1-2). In response to retinoid binding, these dimers control gene expression by binding to specific retinoic acid response elements, by recruiting cofactors and the transcriptional machinery, and by indirectly regulating chromatin structure. Finally, ligand binding and phosphorylation of RARalpha by JNK at Thr181, Ser445 and Ser461 controls the stability of RAR-RXR through the ubiquitin-proteasome pathway (3-4). At least four distinct genetic lesions affect RARalpha and result in acute promyelocytic leukemia (APL). The t(15;17) translocation that results in the PML-RARalpha fusion protein is responsible for more than 99% of APL cases, and the fusion protein inhibits PML-dependent apoptotic pathways in a dominant negative fashion. In addition PML-RARalpha inhibits transcription of retinoic acid target genes by recruiting co-repressors, attenuating myeloid differentiation (5-6).

Background References

1. Mangelsdorf, D. J. et al. (1995) *Cell* 83, 835-839.
2. Mangelsdorf, D.J. and Evans, R.M. (1995) *Cell* 83, 841-850.
3. Bastien, J. and Rochette-Egly, C. (2004) *Gene* 328, 1-16.
4. Srinivas, H. et al. (2005) *Mol. Cell. Biol.* 25, 1054-1069.
5. de The, H. et al. (1990) *Nature* 347, 558-561.
6. Slack, J.L. and Rusiniak, M.E. (2000) *Ann. Hematol.* 79, 227-238.

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 **ChIP:** Chromatin IP

Cross-Reactivity Key

H: Human **M:** Mouse **Mk:** Monkey

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Limited Uses

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