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**Anti-RAR**

Cat #: HM1310  
Rabbit polyclonal IgG  
0.2 µg/µl, store at 4 °C

For research use only

**BACKGROUND**

Retinoic acid receptors (RARs) and retinoid X receptors (RXRs) are nuclear transcription factors that modulate the effects of retinoids (RA) on gene expression. Retinoic acid receptors (RARs) include RAR alpha, RAR beta and RAR gamma, each of which has a high affinity for all trans retinoic acids and belongs to the same class of nuclear transcription factors as thyroid hormone receptors, vitamin D3 receptor and ecdysone receptor. Members of the retinoid X receptor (RXR) family, RXR alpha, RXR beta and RXR gamma, are activated by 9 cis retinoic acid. RARs are highly conserved in ligand binding domains. They are expressed in distinct patterns throughout development and in the mature organism. RA binds RARs, inducing a change in receptor configuration that allows DNA binding and increased gene transcription from specific genes to occur.

**SPECIFICITY**

This antibody specifically reacts with RAR $\alpha$ ,  $\beta$ , and  $\gamma$  of human, mouse and rat origin.

**IMMUNOGEN**

A synthetic peptide derived from N-terminus of human RAR $\alpha$  protein.

**STORAGE**

This antibody is stable for 12 months when stored at 2-8° C.

**REFERENCES**

1. Yang, N., Schüle, R., Mangelsdorf, D.J., and Evans, R.M. 1991. Characterization of DNA-binding and retinoic acid-binding properties of retinoic acid receptor. Proc. Natl. Acad. Sci. USA 88: 3559-3563.
2. Levin, A.A., Sturzenbecker, L.J., Kazmer, S., Bosakowski, T., Huselton, C., Allenby, G., Speck, J., Kratzeisen, C., Rosenberger, M., Lovey, A., and Grippo, J.F. 1992. 9-cis-retinoic acid stereoisomer binds and activates the nuclear receptor RXR. Nature 355: 359-361.
3. Rees, J. 1992. The molecular biology of retinoic acid receptors: orphan from good family seeks home. J. Dermatol. 126: 97-104.
4. Mangelsdorf, D.J., Umesono, K., and Evans, R.M. 1994. THE RETINOIDS: Biology, Chemistry, and Medicine, 2nd Edition. Sporn, M.B., Roberts, A.B., and Goodman, D.S., eds. Raven Press, Ltd., New York. 314-349.
5. Bhat, M.K., Ashizawa, K., and Cheng, S.Y. 1994. Phosphorylation enhances the target gene sequence-dependent dimerization of thyroid hormone receptor with retinoid X receptor. Proc. Natl. Acad. Sci. USA 91: 7927-7931.
6. Lotan, R. 1997. Retinoids and chemoprevention of aerodigestive tract cancers. Cancer Metastasis Rev. 16: 349-356.
7. Mattei, M.G., Riviere, M., Krust, A., Ingvarsson, S., Vennstrom, B., Islam, M.Q., Levan, G., Kautner, P., Zelent,

A., and Chambon, P., *et al.* 1991. Chromosomal assignment of retinoic acid receptor (RAR) genes in the human, mouse, and rat genomes. Genomics 10: 1061-1069.

8. Nagpal, S., Ghosn, C., DiSepio, D., Molina, Y., Sutter, M., Klein, E.S. and Chandraratna, R.A. (1999) Retinoid-dependent recruitment of a histone H1 displacement activity by retinoic acid receptor. J. Biol. Chem. 274, 22563-22568.
9. Pettersson, F., Dagleish, A.G., Bissonnette, R.P. and Colston, K.W. (2002) Retinoids cause apoptosis in pancreatic cancer cells via activation of RAR-gamma and altered expression of Bcl-2/Bax. Br. J. Cancer 87, 555-561.
10. Haukdottir, H., Farboud, B. and Privalsky, M.L. (2003) Retinoic acid receptors beta and gamma do not repress, but instead activate target gene transcription in both the absence and presence of hormone ligand. Mol. Endocrinol. 17, 373-385.

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