

Recombinant Human RARA Protein (Ser68-Glu173), His tagged

Cat. No. RARA-6141H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human RARA (Ser68-Glu173) fused with His tag was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	Ser68-Glu173
Description	Receptor for retinoic acid. Retinoic acid receptors bind as heterodimers to their target response elements in response to their ligands, all-trans or 9-cis retinoic acid, and regulate gene expression in various biological processes. The RXR/RAR heterodimers bind to the retinoic acid response elements (RARE) composed of tandem 5'-AGGTCA-3' sites known as DR1-DR5. In the absence of ligand, the RXR-RAR heterodimers associate with a multiprotein complex containing transcription corepressors that induce histone deacetylation, chromatin condensation and transcriptional suppression. On ligand binding, the corepressors dissociate from the receptors and associate with the coactivators leading to transcriptional activation. Formation of a complex with histone deacetylases might lead to inhibition of RARE DNA element binding and to transcriptional repression. Transcriptional activation and RARE DNA element binding might be supported by the transcription factor KLF2. RARA plays an essential role in the regulation of retinoic acid-induced germ cell development during spermatogenesis. Has a role in the survival of early spermatocytes at the beginning prophase of meiosis. In Sertoli cells, may promote the

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survival and development of early meiotic prophase spermatocytes. In concert with RARG, required for skeletal growth, matrix homeostasis and growth plate function. Together with RXRA, positively regulates microRNA-10a expression, thereby inhibiting the GATA6/VCAM1 signaling response to pulsatile shear stress in vascular endothelial cells. In association with HDAC3, HDAC5 and HDAC7 corepressors, plays a role in the repression of microRNA-10a and thereby promotes the inflammatory response

Form	Lyophilized powder/frozen liquid
Molecular Mass	13.95 kDa
Purity	> 90 % as determined by SDS-PAGE
Notes	For research use only.
Storage	Use a manual defrost freezer and avoid repeated freeze thaw cycles. Store at 2 to 8 centigrade for one week. Store at -20 to -80 centigrade for twelve months from the date of receipt.
Storage Buffer	Supplied as solution form in PBS, pH 7.5 or lyophilized from PBS, pH 7.5.
Reconstitution	Reconstitute in sterile water for a stock solution.
Shipping	They are shipped out with dry ice/blue ice unless customers require otherwise.

GENE INFORMATION

Gene Name	RARA retinoic acid receptor, alpha [Homo sapiens (human)]
Official Symbol	RARA

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Synonyms	RARA; retinoic acid receptor, alpha; retinoic acid receptor alpha; NR1B1; RAR; RAR-alpha; retinoic acid receptor, alpha polypeptide; nuclear receptor subfamily 1 group B member 1; retinoic acid nuclear receptor alpha variant 1; retinoic acid nuclear receptor alpha variant 2; nucleophosmin-retinoic acid receptor alpha fusion protein NPM-RAR long form;
Gene ID	5914
mRNA Refseq	NM_000964
Protein Refseq	NP_000955
MIM	180240
UniProt ID	P10276

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