

Recombinant Human RARA, Ligand Binding Domain

Cat. No. RARA-1130H Lot. No. (See product label)

SPECIFICATION

Product Overview

Species Human

Source Sf9 Cells

Description

Recombinant His tagged RAR alpha Ligand Binding Domain was expressed in an E. coli system and purified by affinity and FPLC chromatography. Several members of nuclear receptor family are directly associated with human malignancies including breast cancer, prostate cancer and leukemia. The pathogenesis of each of these diseases is underpinned by the activities of a member of the superfamily; Estrogen Receptor-alpha (ER- α) in breast cancer, Androgen Receptor (AR) in prostate cancer, and Retinoic Acid Receptor alpha (RAR- α) in acute promyelocytic leukemia. Retinoic acid receptors are important in the regulation of growth and differentiation of epithelial tissues, embryonic and central nervous system development and hematopoiesis. Retinoids mediate their effect by two classes of nuclear receptor proteins, the Retinoic Acid Receptors (RARs) and the Retinoid X Receptors (RXRs), that each consists of three isotypes (α , β , and γ) encoded in separate genes. Upon dimerization with RXR, RARs can bind to specific enhancer sequences in the DNA, so-called Retinoic Acid Response Elements (RAREs), resulting in transcriptional activation of target genes in the presence of ligand. The RAR- α gene is the target of chromosomal rearrangements in all cases of acute promyelocytic leukemia (APL). RAR- α is a negative regulator of promyelocyte differentiation when not complexed with RA, and stimulates this differentiation when bound to RA. Recombinant RAR- α -LBD was

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	expressed in a baculovirus system and purified by an affinity column in combination with FPLC chromatography.
Purity	> 90% by SDS-PAGE.
Form	Liquid. Supplied in 20 mM Tris-HCl pH 8.0, 20% glycerol, 100 mM KCl, 0.2 mM EDTA and 1 mM DTT.
Application	RAR-α has been applied in in vitro transcription assays, DNA-protein and protein-protein interaction assays.
Storage	Quality guaranteed for 12 months. Store at -80°C. Avoid freeze / thaw cycles.
Usage	For in vitro use only.

GENE INFORMATION

Gene Name	RARA retinoic acid receptor, alpha [Homo sapiens]
Synonyms	RARA; NR1B1; RAR; RAR-alpha; Retinoic acid receptor, alpha; Retinoic acid receptor alpha; OTTHUMP00000164454; OTTHUMP00000164456; Nuclear receptor subfamily 1 group B member 1; Retinoic acid receptor, alpha polypeptide; retinoic acid receptor, alpha; nucleophosmin-retinoic acid receptor alpha fusion protein NPM-RAR long form; Retinoic acid receptor alpha (RAR-alpha); NR1B1 (nuclear receptor subfamily 1, group B, member 1)
Gene ID	5914
mRNA Refseq	NM_000964
Protein Refseq	NP_000955

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MIM	180240
UniProt ID	P10276
Chromosome Location	17q21
Function	metal ion binding; protein binding; retinoic acid binding; retinoic acid receptor activity; sequence-specific DNA binding; steroid hormone receptor activity; transcription coactivator activity; transcription factor activity; zinc ion binding
PDB rendering based on 1dkf.	