

Recombinant Human Retinoic Acid Receptor, Beta, Ligand Binding Domain

Cat. No. RARB-1133H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Species	Human
Source	Sf9 Cells

Description

Recombinant His tagged RAR beta Ligand Binding Domain was expressed in an E. coli system and purified by affinity and FPLC chromatography. 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 consist 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. Retinoids, the natural and synthetic vitamin A derivatives, are known to inhibit the proliferation of lung cancer and breast cancer cells and the growth of carcinogen-induced bronchogenic squamous cell carcinoma and mammary tumors, and have been used as chemoprevention agents against both types of cancer. A growing body of evidence supports the hypotheses that the RAR β gene is a tumor suppressor gene and the chemopreventive effects of retinoids are due to induction of RAR β . RAR β expression is reduced in many malignant tumors including breast carcinoma. Recombinant RAR β -LBD was expressed in a baculovirus system and purified by an affinity column in combination with FPLC chromatography.

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Purity	> 95% 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 β can be 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.
Pathways	Non-small cell lung cancer; Pathways in cancer; Small cell lung cancer

GENE INFORMATION

Gene Name	RARB retinoic acid receptor, beta [Homo sapiens]
Synonyms	retinoic acid receptor, beta; HAP; RRB2; NR1B2; RARB; RAR-epsilon; RAR-beta; OTTHUMP00000161046; HBV-activated protein; retinoic acid receptor beta 2; retinoic acid receptor beta 4; retinoic acid receptor beta 5; hepatitis B virus activated protein; retinoic acid receptor, beta polypeptide; RAR-epsilon; HBV-activated protein; Nuclear receptor subfamily 1 group B member 2
Gene ID	5915
mRNA Refseq	NM_000965
Protein Refseq	NP_000956
MIM	180220

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UniProt ID	P10826
Chromosome Location	3p24
Function	metal ion binding; retinoic acid receptor activity; sequence-specific DNA binding; steroid hormone receptor activity; transcription activator activity; transcription factor activity; zinc ion binding
PDB rendering based on 1dsz.	