

RAR α - Retinoic Acid Receptor Alpha

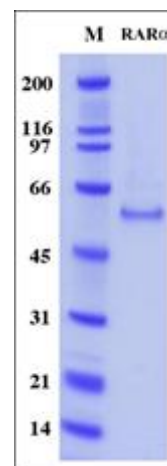
Catalog Ref.	Vial Size		Lot Number	Molecular Mass	Accession
P1054-01	5,000 units (ng)	<input type="checkbox"/>	050409XY	55 kDa	NM_000964
P1054-02	12,500 units (ng)	<input type="checkbox"/>			

Storage conditions:

Store at -80 °C

Description:

Several members of the 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 alpha) in breast cancer, androgen receptor (AR) in prostate cancer, and retinoic acid receptor alpha (RAR alpha) in acute promyelocytic leukemia (1). Retinoic acid receptors are important in the regulation of growth and differentiation of epithelial tissues, embryonic and central nervous system development and hematopoiesis (2). 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 (3). 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 (4). The retinoic acid receptor alpha gene is the target of chromosomal rearrangements in all cases of acute promyelocytic leukemia (APL). RAR alpha is a negative regulator of promyelocyte differentiation when not complexed with RA, and stimulates this differentiation when bound to RA (5).



Source:

Recombinant His tagged RAR alpha was expressed in a baculovirus system and purified by affinity chromatography in combination with FPLC chromatography.

Applications:

RAR alpha has been applied in in vitro transcription assays, DNA-protein and protein-protein interaction assays.

For Research Use Only.

Quality Control:

The purified recombinant protein is greater than 90% homogeneous based on SDS-PAGE analysis.

Unit Definition:

1 unit is equal to 1 nanogram of purified protein.

Concentration:

0.5 mg/mL (in 1x dilution buffer A)

Reagents Supplied:

1x dilution buffer A: 20 mM Tris-Cl (pH 8.0), 20% Glycerol, 100 mM KCl, 1 mM DTT and 0.2 mM EDTA

References:

1. Hart S.M. (2002) Biol. Res. 35, 295-3003
2. Kastner et al. (1995) Cell, 83, 859-869
3. Leid et al., (1992) Trends Biochem. Sci. 17, 427-433
4. Linney et al., (1992) Curr. Top. Dev. Biol. 27, 309-350
5. Piazza et al. (2002) Oncogene 20, 7216-72