

## RORa Protein, Human (Sf9, His)

<b>Cat. No.:</b>	HY-P701401
<b>Synonyms:</b>	RORA; Nuclear receptor ROR-alpha; Nuclear receptor RZR-alpha; Nuclear receptor subfamily 1 group F member 1; RAR-related orphan receptor A; Retinoid-related orphan receptor-alpha
<b>Species:</b>	Human
<b>Source:</b>	Sf9 insect cells
<b>Accession:</b>	P35398 (A271-G523)
<b>Gene ID:</b>	6095
<b>Molecular Weight:</b>	

### PROPERTIES

<b>Appearance</b>	Solution.
<b>Formulation</b>	Supplied as a 0.22 µm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	Please use rapid thawing with running water to thaw the protein.
<b>Storage &amp; Stability</b>	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
<b>Shipping</b>	Shipping with dry ice.

### DESCRIPTION

<b>Background</b>	<p>RORa Protein, a nuclear receptor, functions as a key regulator in diverse physiological processes, including embryonic development, cellular differentiation, immunity, circadian rhythm, and metabolism of lipids, steroids, xenobiotics, and glucose. Operating as a monomer, RORa binds DNA to ROR response elements (RORE) and exhibits intrinsic transcriptional activity. Natural ligands like oxysterols act as agonists or inverse agonists, modulating its transcriptional activity. RORa recruits distinct cofactor combinations to target gene regulatory regions, modulating their expression depending on tissue, time, and promoter contexts. Its regulatory influence extends to genes involved in photoreceptor and skeletal muscle development, cerebellum development, granule cell proliferation, calcium-mediated signal transduction, and circadian expression of clock genes. In the liver, RORa, along with RORC, acts as a positive or negative modulator of lipid, steroid, and xenobiotic metabolism genes. It also plays a role in hepatic glucose metabolism and adipocyte differentiation regulation. Moreover, RORa is implicated in CD4(+) T-helper cell lineage specification into T(H)17 cells, inhibits NF-kappa-B signaling, and interacts with HIF1A in hypoxia signaling. The multifaceted interactions of RORa with various cofactors and regulatory elements underscore its versatile role in orchestrating complex biological processes.</p>
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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