Datasheet for ABIN7555122

# Retinoic Acid Receptor alpha Protein (AA 1-462) (His tag)

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## Overview

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| Quantity: | 1 mg |
| Target: | Retinoic Acid Receptor alpha (RARA) |
| Protein Characteristics: | AA 1-462 |
| Origin: | Human |
| Source: | HEK-293 Cells |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This Retinoic Acid Receptor alpha protein is labelled with His tag. |

## Product Details

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| Purpose: | Custom-made recombinant RARA Protein expressed in mammalian cells. |
| Sequence: | MASNSSSCPT PGGGHLNGYP VPPYAFFFPP MLGGLSPPGA LTTLQHQLPV SGYSTPSPAT IETQSSSSEE IVPSPPSPPP LPRIYKPCFV CQDKSSGYHY GVSACEGCKG FFRRSIQKNM VYTCHRDKNC IINKVTRNRC QYCRLQKCFE VGMSKESVRN DRNKKKKEVP KPECSESYTL TPEVGELIEK VRKAHQETFP ALCQLGKYTT NNSSEQRVSL DIDLWDKFSE LSTKCIIKTV EFAKQLPGFT TLTIADQITL LKAACLDILI LRICTRYTPE QDTMTFSDGL TLNRTQMHNA GFGPLTDLVF AFANQLLPLE MDDAETGLLS AICLICGDRQ DLEQPDRVDM LQEPLLEALK VYVRKRRPSR PHMFPKMLMK ITDLRSISAK GAERVITLKM EIPGSMPPLI QEMLENSEGL DTLSGQPGGG GRDGGGLAPP PGSCSPSLSP SSNRSSPATH SP **Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.** |
| Specificity: | If you are looking for a specific domain and are interested in a partial protein or a different |

## Product Details

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| | isoform, please contact us regarding an individual offer. |
| Characteristics: | Key Benefits:<br>• Made to order protein - from design to production - by highly experienced protein experts.<br>• Protein expressed in mammalian cells and purified in one-step affinity chromatography<br>• The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.<br>• State-of-the-art algorithm used for plasmid design (Gene synthesis).<br><br>This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.<br><br>If you are not interested in a full length protein, please contact us for individual protein fragments.<br><br>The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified. |
| Purity: | > 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC) |
| Grade: | custom-made |

## Target Details

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| Target: | Retinoic Acid Receptor alpha (RARA) |
| Alternative Name: | RARA (RARA Products) |
| Background: | Retinoic acid receptor alpha (RAR-alpha) (Nuclear receptor subfamily 1 group B member 1),FUNCTION: Receptor for retinoic acid (PubMed:19850744, PubMed:16417524, PubMed:20215566). 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 (PubMed:28167758). The RXR/RAR heterodimers bind to the retinoic acid response elements (RARE) composed of tandem 5'-AGGTCA-3' sites known as DR1-DR5 (PubMed:28167758, PubMed:19398580). 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 (PubMed:16417524). On ligand binding, the corepressors dissociate from the receptors and associate with the coactivators leading to transcriptional activation (PubMed:9267036, PubMed:19850744, PubMed:20215566). Formation of a complex with histone deacetylases |

## Target Details

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| | might lead to inhibition of RARE DNA element binding and to transcriptional repression (PubMed:28167758). Transcriptional activation and RARE DNA element binding might be supported by the transcription factor KLF2 (PubMed:28167758). RARA plays an essential role in the regulation of retinoic acid-induced germ cell development during spermatogenesis (By similarity). Has a role in the survival of early spermatocytes at the beginning prophase of meiosis (By similarity). In Sertoli cells, may promote the survival and development of early meiotic prophase spermatocytes (By similarity). In concert with RARG, required for skeletal growth, matrix homeostasis and growth plate function (By similarity). Together with RXRA, positively regulates microRNA-10a expression, thereby inhibiting the GATA6/VCAM1 signaling response to pulsatile shear stress in vascular endothelial cells (PubMed:28167758). In association with HDAC3, HDAC5 and HDAC7 corepressors, plays a role in the repression of microRNA-10a and thereby promotes the inflammatory response (PubMed:28167758). {ECO:0000250\|UniProtKB:P11416, ECO:0000269\|PubMed:16417524, ECO:0000269\|PubMed:19398580, ECO:0000269\|PubMed:19850744, ECO:0000269\|PubMed:20215566, ECO:0000269\|PubMed:28167758, ECO:0000269\|PubMed:9267036}. |
| Molecular Weight: | 50.8 kDa |
| UniProt: | P10276 |
| Pathways: | Nuclear Receptor Transcription Pathway, Retinoic Acid Receptor Signaling Pathway, Intracellular Steroid Hormone Receptor Signaling Pathway, Steroid Hormone Mediated Signaling Pathway, Cellular Response to Molecule of Bacterial Origin, Positive Regulation of Immune Effector Process, S100 Proteins |

## Application Details

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| Application Notes: | We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though. |
| Restrictions: | For Research Use only |

## Handling

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| Format: | Liquid |
| Buffer: | The buffer composition is at the discretion of the manufacturer. |
| Handling Advice: | Avoid repeated freeze-thaw cycles. |

## Handling

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| Storage: | -80 °C |
| Storage Comment: | Store at -80°C. |
| Expiry Date: | 12 months |