Serine/Threonine-Protein Kinase ATR (atl-1) Caenorhabditis Elegans Recombinant Protein

PRODUCT OVERVIEW

Product Name	Serine/threonine-protein kinase ATR (atl-1), Recombinant Protein
Full Product Name	Recombinant Caenorhabditis elegans Serine/threonine-protein kinase ATR (atl-1), partial
Product Gene Name	atl-1 recombinant protein
Product Synonym Gene Name	atl-1
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	290,663 Da
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
3D Structure	ModBase 3D Structure for Q22258
Species	Caenorhabditis elegans
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for atl-1 recombinant protein	MBS1344914 is a recombinant protein targeting atl-1. Also known as Recombinant Caenorhabditis elegans Serine/threonine-protein kinase ATR (atl-1), partial. Host: E Coli or Yeast or Baculovirus or Mammalian Cell.
Other Notes	Small volumes of atl-1 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for atl-1. It may not necessarily be applicable to this product.

NCBI GI #	72000381
NCBI GeneID	179352
NCBI Accession #	NP_001024110.1
UniProt Primary Accession #	Q22258
UniProt Secondary Accession #	Q9Y061
UniProt Related Accession #	Q22258
GenBank Nucleotide #	NM_001028939.2
NCBI Official Full Name	Serine/threonine-protein kinase ATR
NCBI Official Symbol	atl-1

UniProt Protein Name	Serine/threonine-protein kinase ATR
UniProt Synonym Protein Names	ATM-like protein 1; Ataxia telangiectasia and Rad3-related protein homolog; ATR homolog; Ce-atl-1
UniProt Gene Name	atl-1
UniProt Synonym Gene Names	ATR homolog
NCBI Protein Information	ATM (ataxia telangectasia mutated)-Like; Serine/threonine-protein kinase ATR
UniProt Comments for atl-1	Serine/threonine protein kinase which activates checkpoint signaling upon genotoxic stresses such as ionizing radiation (IR), ultraviolet light (UV), or DNA replication stalling, thereby acting as a DNA damage sensor (). Recognizes the substrate consensus sequence [ST]-Q (). Phosphorylates various proteins, which collectively inhibits DNA replication and mitosis and promotes DNA repair and recombination (). Prevents mitotic catastrophe by functioning in the S-phase checkpoint and cooperating with atm-1 in the checkpoint response to double-strand breaks (DSBs) after ionizing radiation (IR) to induce cell cycle arrest or apoptosis via the cep-1/p53 pathway (PubMed:12747829, PubMed:16319925). In response to ionizing radiation, probably required for the association between the brc-1-brd-1 heterodimer and rad-51 and let-70 in order to activate E3-ubiquitin ligase activity of the heterodimer and induce ubiquitination at DNA damage sites (PubMed:16628214).
Research Articles on atl-1	**1.** ATL-1 functions to maintain mtDNA independently of ribonucleotide reductase
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