

Recombinant Human ATR protein ab204140

1 Image

Description

Product name	Recombinant Human ATR protein
Purity	> 85 % SDS-PAGE. Assessed by densitometry. Affinity purified.
Expression system	Baculovirus infected Sf9 cells
Accession	<u>Q13535</u>
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Human
Sequence	MLKKLVEEATFSEILIPQSVMIPTLPSILGTHANHASHEPF PGHWAYIA GFDDMVEILASLQPKKISLKGSDGKFYIMMCKPKDDLRLK DCRLMEFNLS INKCLRKDAESRRRELHIRTAVIPLNDECGIIEWVNNTAGL RPILTKLY KEKGVYMTGKELRQCMLPKSAALSEKLKVFREFLLPRHP PIFHEWFLRTF PDPTSWYSSRSAYCRSTAVMSMGVYILGLGDRHGENILFD SLTGECVHVD FNCLFNKGETFEVPEIVPRLTHNMVNGMGPMGTEGLFR RACEVTMLMR DQREPLMSVLKTFLLHDPLVEWSKPKVGHGSKAPLNETGEV VNEKAKTHVLD IEQRLQGVIK TRNRVT
Predicted molecular weight	70 kDa including tags
Amino acids	2245 to 2610
Tags	GST tag N-Terminus

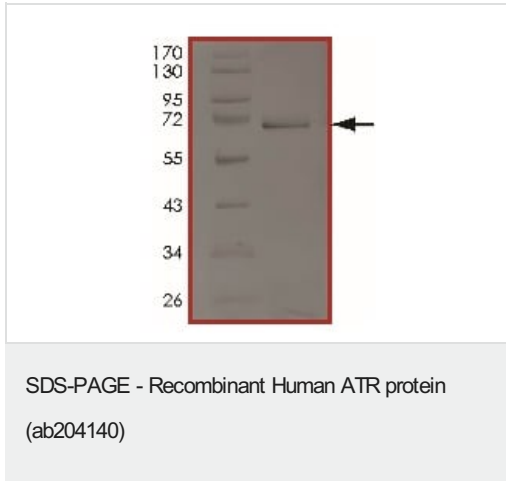
Specifications

Our **Abpromise guarantee** covers the use of **ab204140** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE
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Form	Liquid
Preparation and Storage	
Stability and Storage	<p>Shipped on Dry Ice. Upon delivery aliquot. Store at -80°C. Avoid freeze / thaw cycle.</p> <p>pH: 7.50</p> <p>Constituents: 0.79% Tris HCl, 0.87% Sodium chloride, 0.31% Glutathione, 0.003% EDTA, 0.004% DTT, 0.002% PMSF, 25% Glycerol (glycerin, glycerine)</p>
General Info	
Function	<p>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 BRCA1, CHEK1, MCM2, RAD17, RPA2, SMC1 and p53/TP53, which collectively inhibit DNA replication and mitosis and promote DNA repair, recombination and apoptosis. Phosphorylates 'Ser-139' of histone variant H2AX/H2AFX at sites of DNA damage, thereby regulating DNA damage response mechanism. Required for FANCD2 ubiquitination. Critical for maintenance of fragile site stability and efficient regulation of centrosome duplication.</p>
Tissue specificity	Ubiquitous, with highest expression in testis. Isoform 2 is found in pancreas, placenta and liver but not in heart, testis and ovary.
Involvement in disease	Defects in ATR are a cause of Seckel syndrome type 1 (SCKL1) [MIM:210600]. SCKL1 is a rare autosomal recessive disorder characterized by growth retardation, microcephaly with mental retardation, and a characteristic 'bird-headed' facial appearance.
Sequence similarities	<p>Belongs to the PI3/PI4-kinase family. ATM subfamily.</p> <p>Contains 1 FAT domain.</p> <p>Contains 1 FATC domain.</p> <p>Contains 2 HEAT repeats.</p> <p>Contains 1 PI3K/PI4K domain.</p>
Post-translational modifications	Phosphorylated; autophosphorylates in vitro.
Cellular localization	Nucleus. Nucleus > PML body. Depending on the cell type, it can also be found in PML nuclear bodies. Recruited to chromatin during S-phase. Redistributes to discrete nuclear foci upon DNA damage, hypoxia or replication fork stalling.
Images	



SDS-PAGE showing ab204140.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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