



Rabbit Anti-ATR antibody

SL23805R

Product Name:	ATR
Chinese Name:	兔抗丝氨酸/苏氨酸蛋白激酶ATR多克隆抗体
Alias:	ACTR; AIB1; amplified in breast cancer 1; Ataxia Telangiectasia and Rad3 Related; Ataxia telangiectasia and Rad3 related; Ataxia telangiectasia and Rad3-related protein; ATR; ATR_HUMAN; CAGH16; CBP interacting protein; CTG26; FCTCS; FRAP Related Protein 1; FRAP-related protein 1; FRP 1; FRP1; Human JTV 1; MEC1; MEC1 mitosis entry checkpoint 1 homolog; nuclear receptor coactivator 3; pCIP; protein kinase ATR; RAC3; Rad3 related protein; receptor associated coactivator 3; SCKL; SCKL1; Seckel syndrome; Serine/threonine protein kinase ATR; Serine/threonine-protein kinase ATR; steroid receptor coactivator protein 3; thyroid hormone receptor activator molecule 1; TRAM1.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,Horse,Rabbit,Zebrafish,Sheep,
Applications:	WB=1:500-2000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	301kDa
Cellular localization:	The nucleus
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human ATR:
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

PubMed:

[PubMed](#)

Ataxia Telangiectasia Mutated (ATM) and Rad 3-related protein (ATR) is a phosphatidylinositol kinase (PK)-related kinase which functions in response to DNA damage and repair as well as at DNA replication checkpoints during the cell cycle. ATR is a member of the DNA-PK kinases closely related to ATM and DNA-PK for which DNA stimulates the observed kinase activity. Chromosomal remodeling proteins have also been reported to associate with ATR complexes. Several known components of the NuRD complex including histone deacetylase 1 (HDAC1), HDAC2, and CHD4

Function:

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.

Subunit:

Interacts with CARM1 (By similarity). Present in a complex containing NCOA2, IKKA, IKKB, IKBKG and the histone acetyltransferase protein CREBBP. Interacts with CASP8AP2, NR3C1 and PCAF. Interacts with ATAD2 and this interaction is enhanced by estradiol. Found in a complex containing NCOA3, AR and MAK. Interacts with DDX5.

Subcellular Location:

Cytoplasm. Nucleus. Note=Mainly cytoplasmic and weakly nuclear. Upon TNF activation and subsequent phosphorylation, it translocates from the cytoplasm to the nucleus.

Tissue Specificity:

Ubiquitous, with highest expression in testis. Isoform 2 is found in pancreas, placenta and liver but not in heart, testis and ovary.

Post-translational modifications:

Acetylated by CREBBP. Acetylation occurs in the RID domain, and disrupts the interaction with nuclear receptors and regulates its function.

Methylated by CARM1 (By similarity).

Phosphorylated by IKK complex. Regulated its function. Phosphorylation at Ser-601 by CK1 promotes coactivator function.

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,

Product Detail:

microcephaly with mental retardation, and a characteristic 'bird-headed' facial appearance.

Similarity:

Belongs to the PI3/PI4-kinase family. ATM subfamily.

Contains 1 FAT domain.

Contains 1 FATC domain. Contains 2 HEAT repeats. Contains 1 PI3K/PI4K domain.

SWISS:

Q13535

Gene ID:

545

Database links:

[Entrez Gene: 545](#)Human

[Entrez Gene: 245000](#)Mouse

[Omim: 601215](#)Human

[SwissProt: Q13535](#)Human

[SwissProt: Q9JKK8](#)Mouse

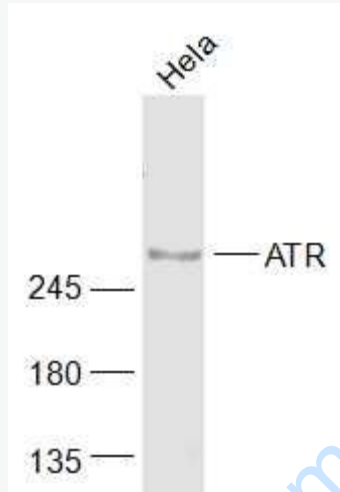
[Unigene: 271791](#)Human

[Unigene: 212462](#)Mouse

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Picture:



Sample:

HeLa(Human) Cell Lysate at 30 ug

Primary: Anti-ATR? (SL23805R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 301 kD

Observed band size: 301 kD