SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

[Primary Antibody]

Rabbit Anti-ATR antibody

Catalog Number: SL23805R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	ATR
Immunogen:	KLH conjugated synthetic peptide derived from human ATR
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	WB=1:500-2000 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Human (predicted:Mouse,Rat,Dog,Pig,Cow,Horse,Rabbit,Zebrafish,Sheep)
Predicted MW.:	301kDa
Subcellular Location:	The nucleus
Background:	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,

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

	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, 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. **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.

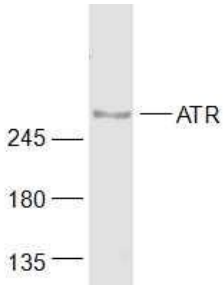
SunLong Biotech Co.,LTD

Tel: 0086-571-56623320 Fax:0086-571-56623318

E-mail:sales@sunlongbiotech.com

www.sunlongbiotech.com

[VALIDATION IMAGES]



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

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