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# Smg1 Antibody
**Rabbit mAb**
**Catalog # AP92579**

## Specification

### Smg1 Antibody - Product Information

| | |
|---|---|
| Application | **WB** |
| Primary Accession | Q96Q15 |
| Reactivity | **Rat** |
| Clonality | **Monoclonal** |
| **Other Names** | |
| 61E3.4; ATX; hSMG1; LIP; smg1; | |
| Isotype | **Rabbit IgG** |
| Host | **Rabbit** |
| Calculated MW | **410501 Da** |

### Smg1 Antibody - Additional Information

| | |
|---|---|
| Dilution | **WB~~1:1000** |
| Purification | **Affinity-chromatography** |
| Immunogen | **A synthesized peptide derived from human Smg1** |
| Description | **Serine/threonine protein kinase involved in both mRNA surveillance and genotoxic stress response pathways. Recognizes the substrate consensus sequence [ST]-Q. Plays a central role in nonsense-mediated decay (NMD) of mRNAs containing premature stop codons by phosphorylating UPF1/RENT1.** |
| Storage Condition and Buffer | **Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.** |

### Smg1 Antibody - Protein Information

**Name** SMG1 (HGNC:30045)

**Function**
Serine/threonine protein kinase involved in both mRNA surveillance and genotoxic stress response pathways. Recognizes the substrate consensus sequence [ST]-Q. Plays a central role in nonsense-mediated decay (NMD) of mRNAs containing premature stop codons by phosphorylating UPF1/RENT1. Recruited by release factors to stalled ribosomes together with SMG8 and SMG9 (forming the SMG1C protein kinase complex), and UPF1 to form the transient SURF (SMG1-UPF1-eRF1-eRF3) complex. In EJC-dependent NMD, the SURF complex associates with the exon junction complex (EJC) through UPF2 and allows the formation of an UPF1-UPF2-UPF3

surveillance complex which is believed to activate NMD. Also acts as a genotoxic stress-activated protein kinase that displays some functional overlap with ATM. Can phosphorylate p53/TP53 and is required for optimal p53/TP53 activation after cellular exposure to genotoxic stress. Its depletion leads to spontaneous DNA damage and increased sensitivity to ionizing radiation (IR). May activate PRKCI but not PRKCZ.

**Cellular Location**
Nucleus. Cytoplasm. Note=Present in the chromatoid body {ECO:0000250|UniProtKB:Q8BKX6}

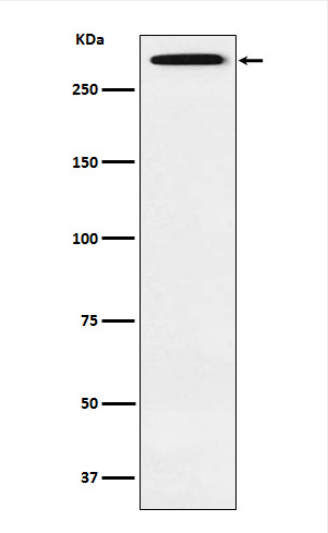
**Tissue Location**
Widely expressed, with highest level in heart and skeletal muscle. Expressed in placenta, brain, lung and spleen, but not in liver.

## Smg1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## Smg1 Antibody - Images




Western blot analysis of Smg1 expression in Saos2 cell lysate.