

**SMG1 Polyclonal Antibody**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP54915****Specification**

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**SMG1 Polyclonal Antibody - Product Information**

Application	IHC-P
Primary Accession	<a href="#">O96Q15</a>
Reactivity	Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	410501

**SMG1 Polyclonal Antibody - Additional Information****Gene ID** 23049**Other Names**

Serine/threonine-protein kinase SMG1, SMG-1, hSMG-1, 2.7.11.1, 61E3.4, Lambda/iota protein kinase C-interacting protein, Lambda-interacting protein, SMG1, ATX, KIAA0421, LIP

**Format**

0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

**Storage**

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. 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.

**SMG1 Polyclonal 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}

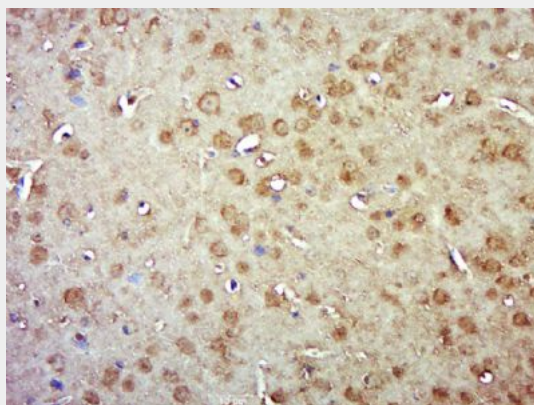
**Tissue Location**

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

**SMG1 Polyclonal 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 Cytometry](#)
- [Cell Culture](#)

**SMG1 Polyclonal Antibody - Images**

Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (SMG1) Polyclonal Antibody, Unconjugated (bs-12637R) at 1:500 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.