

SMG1 Rabbit mAb

Catalog # AP77014

Specification

SMG1 Rabbit mAb - Product Information

Application
Primary Accession
Reactivity
Host
Clonality
Calculated MW

WB
096015
Human, Mouse, Rat
Rabbit
Monoclonal Antibody
410501

SMG1 Rabbit mAb - Additional Information

Gene ID 23049

Other Names SMG1

Dilution WB~~1/500-1/1000

Format

10mM PBS, pH 7.4, 150mM sodium chloride, 0.05% BSA, 0.02% sodium azide and 50% glycerol.

Storage

Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

SMG1 Rabbit mAb - Protein Information

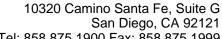
Name SMG1 (HGNC:30045)

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 nonsensemediated 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}





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Tissue Location

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

SMG1 Rabbit mAb - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- <u>Immunofluorescence</u>
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

SMG1 Rabbit mAb - Images

