


Product datasheet

Anti-Smg1 antibody ab82548

1 Image

Overview

<b>Product name</b>	Anti-Smg1 antibody
<b>Description</b>	Rabbit polyclonal to Smg1
<b>Tested applications</b>	<b>Suitable for:</b> IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Mouse, Rabbit, Chicken, Guinea pig, Cow, Dog, Turkey, Chimpanzee, Gorilla, Orangutan, Platypus 
<b>Immunogen</b>	Synthetic peptide corresponding to a region between residues 2300 and 2350 of Human Smg1 (Q96QV0)
<b>Positive control</b>	Human breast adenocarcinoma tissue

Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
<b>Storage buffer</b>	Preservative: 0.09% Sodium Azide Constituents: 0.1% BSA, Tris buffered saline
<b>Purity</b>	Immunogen affinity purified
<b>Purification notes</b>	Affinity purified using an epitope specific to Smg1 immobilized on solid support.
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab82548** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
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IHC-P

**Application notes** IHC-P: 1/100 - 1/500.

Epitope exposure with citrate buffer will enhance staining.

Not yet tested in other applications.

Optimal dilutions/concentrations should be determined by the end user.

## Target

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### 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.

### Tissue specificity

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

### Sequence similarities

Belongs to the PI3/PI4-kinase family.

Contains 1 FAT domain.

Contains 1 FATC domain.

Contains 1 HEAT repeat.

Contains 1 PI3K/PI4K domain.

### Post-translational modifications

Autophosphorylated.

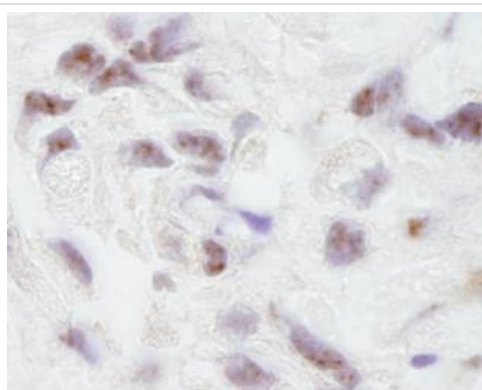
### Cellular localization

Nucleus. Cytoplasm.

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## Images

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ab82548, at a 1:250 dilution, staining human Smg1 in breast adenocarcinoma, using Immunohistochemistry, Formalin/PFA-fixed paraffin-embedded tissue.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Smg1 antibody (ab82548)

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