


Product datasheet

Anti-Smg1 antibody ab80600

[1 References](#) [2 Images](#)

Overview

Product name	Anti-Smg1 antibody
Description	Rabbit polyclonal to Smg1
Tested applications	Suitable for: WB, IP
Species reactivity	Reacts with: Human Predicted to work with: Mouse, Rabbit, Guinea pig, Cow, Dog, Chimpanzee, Rhesus monkey, Orangutan, Platypus 
Immunogen	Synthetic peptide within Human Smg1 aa 1250-1300. The exact sequence is proprietary. Database link: NP_055907.3
Positive control	HeLa cell lysate

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	Preservative: 0.09% Sodium Azide Constituents: 8mM PBS, 60mM Citrate, 150mM Tris, pH 7 - 8
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab80600** 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
WB		1/1000 - 1/10000. Predicted molecular weight: 410 kDa.
IP		Use at 2-5 µg/mg of lysate.

Target

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.

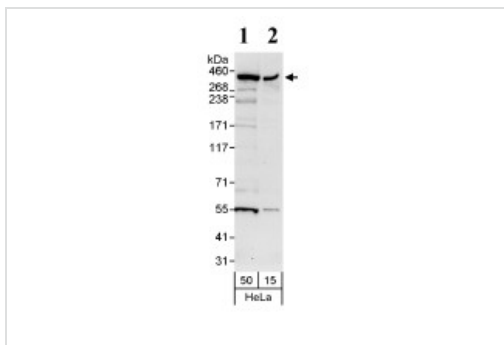
Post-translational modifications

Autophosphorylated.

Cellular localization

Nucleus. Cytoplasm.

Images



Western blot - Smg1 antibody (ab80600)

All lanes : Anti-Smg1 antibody (ab80600) at 1 µg/ml

Lane 1 : Whole HeLa cell lysate at 50 µg

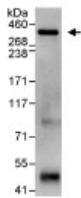
Lane 2 : Whole HeLa cell lysate at 15 µg

Developed using the ECL technique

Predicted band size : 410 kDa

Observed band size : 410 kDa

Additional bands at : 55 kDa. We are unsure as to the identity of these extra bands.



Immunoprecipitation - Smg1 antibody (ab80600)

Detection of Human Smg1 by Immunoprecipitation. Sample: Whole cell lysate (1 mg for IP, 20% of IP loaded) from HeLa cells. ab80600 used for IP at 3 mcg/mg lysate. Subsequent Wb detection with ab80600 used at 1 mcg/ml. Chemiluminescence with exposure times of 3 mins

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