abcam

Product datasheet

Anti-Smad2 (phospho S467) antibody ab53100

14 Abreviews 93 References 4 Images

Overview

Product name	Anti-Smad2 (phospho S467) antibody
Description	Rabbit polyclonal to Smad2 (phospho S467)
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide corresponding to Human Smad2 (phospho S467). Database link: **Q15796**
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7 Preservative: 0.02% Sodium azide Constituents: 0.87% Sodium chloride, PBS Without Mg+2 and Ca+2 Some lots contain 50% Glycerol, please contact our scientific support to confirm.
Purity	Immunogen affinity purified
Purification notes	Affinity purified from rabbit antiserum by affinity chromatography using epitope specific phosphopeptide. The antibody against non phosphopeptide was removed by chromatography using non phosphopeptide corresponding to the phosphorylation site
Clonality	Polyclonal

Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab53100 in the following tested applications.

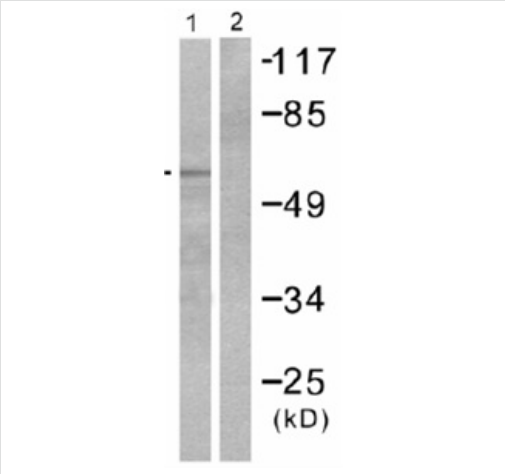
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★☆ **(9)**	1/300 - 1/1000. Detects a band of approximately 58 kDa (predicted molecular weight: 58 kDa).
IHC-P		1/50 - 1/100. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

Target

Function	Receptor-regulated SMAD (R-SMAD) that is an intracellular signal transducer and transcriptional modulator activated by TGF-beta (transforming growth factor) and activin type 1 receptor kinases. Binds the TRE element in the promoter region of many genes that are regulated by TGF-beta and, on formation of the SMAD2/SMAD4 complex, activates transcription. May act as a tumor suppressor in colorectal carcinoma.
Tissue specificity	Expressed at high levels in skeletal muscle, heart and placenta.
Sequence similarities	Belongs to the dwarfin/SMAD family. Contains 1 MH1 (MAD homology 1) domain. Contains 1 MH2 (MAD homology 2) domain.
Post-translational modifications	Phosphorylated on one or several of Thr-220, Ser-245, Ser-250, and Ser-255. In response to TGF-beta, phosphorylated on Ser-465/467 by TGF-beta and activin type 1 receptor kinases. Able to interact with SMURF2 when phosphorylated on Ser-465/467, recruiting other proteins, such as SNON, for degradation. In response to decorin, the naturally occurring inhibitor of TGF-beta signaling, phosphorylated on Ser-240 by CaMK2. Phosphorylated by MAPK3 upon EGF stimulation; which increases transcriptional activity and stability, and is blocked by calmodulin. In response to TGF-beta, ubiquitinated by NEDD4L; which promotes its degradation. Acetylated on Lys-19 by coactivators in response to TGF-beta signaling, which increases transcriptional activity. Isoform short: Acetylation increases DNA binding activity in vitro and enhances its association with target promoters in vivo. Acetylation in the nucleus by EP300 is enhanced by TGF-beta.
Cellular localization	Cytoplasm. Nucleus. Cytoplasmic and nuclear in the absence of TGF-beta. On TGF-beta stimulation, migrates to the nucleus when complexed with SMAD4. On dephosphorylation by phosphatase PPM1A, released from the SMAD2/SMAD4 complex, and exported out of the nucleus by interaction with RANBP1.

Images

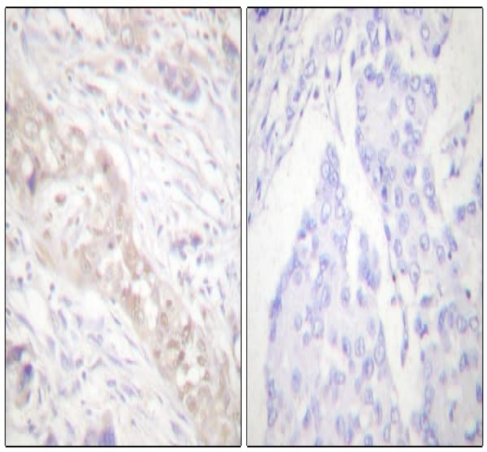


Western blot - Anti-Smad2 (phospho S467) antibody (ab53100)

All lanes : Anti-Smad2 (phospho S467) antibody (ab53100) at 1/300 dilution

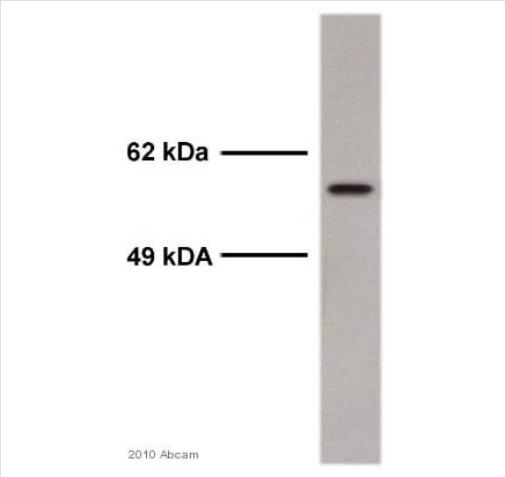
Lane 1 : HeLa cell extract treated with PMA (125ng/ml, 15 mins)
Lane 2 : HeLa cell extract treated with PMA (125ng/ml, 15 mins) with phosphopeptide

Predicted band size: 58 kDa
Observed band size: 58 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Smad2 (phospho S467) antibody (ab53100)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human breast carcinoma tissue labeling Smad2 (phospho S467) with ab53100. The image on the right is blocked with a phosphopeptide.



Western blot - Anti-Smad2 (phospho S467) antibody (ab53100)

This image is courtesy of an anonymous Abreview

Anti-Smad2 (phospho S467) antibody (ab53100) at 1/750 dilution (for 16 hours at 4°C) + Mouse brain whole tissue lysate at 18 µg

Secondary

An HRP-conjugated Goat anti-rabbit-IgG polyclonal at 1/7000 dilution

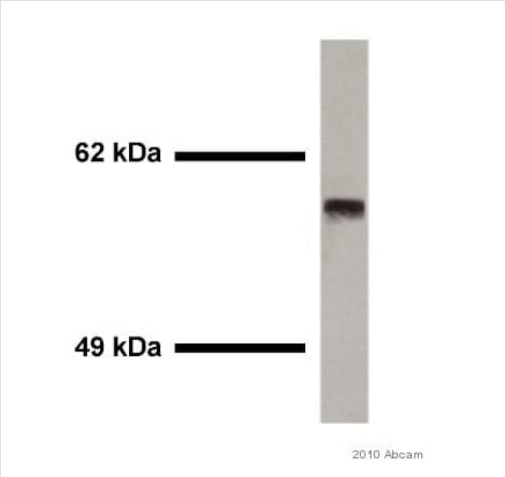
Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 58 kDa
Observed band size: 58 kDa

Exposure time: 2 minutes

Blocking Step: 5% Milk for 1 hour at 18°C



Western blot - Anti-Smad2 (phospho S467) antibody (ab53100)

This image is courtesy of an anonymous Abreview.

Anti-Smad2 (phospho S467) antibody (ab53100) at 1/1500 dilution + Rat lung whole tissue lysate at 15 µg with Milk at 5 %

Secondary

Goat antirabbit conjugated to HRP at 1/7000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 58 kDa
Additional bands at: 59 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 2 minutes

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