

Product datasheet

Anti-Smad2 (phospho S255) antibody [EPR2856(N)] - BSA and Azide free ab219598

Recombinant RabMAb

5 Images

Overview

Product name	Anti-Smad2 (phospho S255) antibody [EPR2856(N)] - BSA and Azide free
Description	Rabbit monoclonal [EPR2856(N)] to Smad2 (phospho S255) - BSA and Azide free
Host species	Rabbit
Tested applications	Suitable for: IP, WB, IHC-P, Dot blot
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide (the amino acid sequence is considered to be commercially sensitive) within Human Smad2 aa 200-300 (phospho S255). The exact sequence is proprietary. Database link: Q15796
Positive control	Hela treated with Okadaic acid and Calyculin A, Hela treated with Okadaic acid and Calyculin A, Human endometrium, Human transitional cell carcinoma of bladder.
General notes	Ab219598 is the carrier-free version of ab188334 . This format is designed for use in antibody labeling, including fluorochromes, metal isotopes, oligonucleotides, enzymes.

Our [carrier-free formats](#) are supplied in a buffer free of BSA, sodium azide and glycerol for higher conjugation efficiency.

Use our [conjugation kits](#) for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

ab219598 is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm.

Maxpar® is a trademark of Fluidigm Canada Inc.

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free production

For more information [see here](#).

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to [RabMAb® patents](#).

Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.

Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.

We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.

In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.

We are also updating the applications & species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

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, as well as customer reviews and Q&As.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR2856(N)
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab219598** in the following tested applications.

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

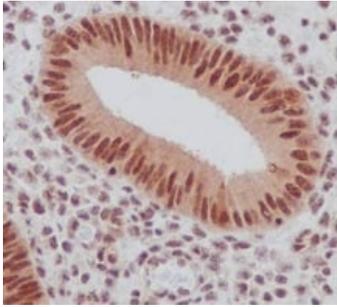
Application	Abreviews	Notes
IP		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration. Detects a band of approximately 58 kDa (predicted molecular weight: 52 kDa).
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Application	Abreviews	Notes
Dot blot		Use at an assay dependent concentration.

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

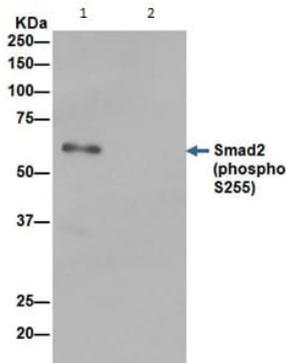


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Smad2 (phospho S255) antibody [EPR2856(N)] - BSA and Azide free (ab219598)

Immunohistochemical analysis of formalin fixed paraffin embedded Human endometrium labeling Smad2 (phospho S255) with [ab188334](#) at 1/100 dilution and HRP Polymer for Rabbit IgG. Counterstained with Hematoxylin.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab188334](#)).

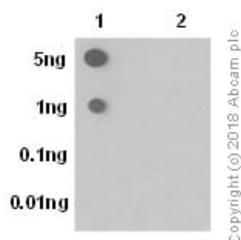
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunoprecipitation - Anti-Smad2 (phospho S255) antibody [EPR2856(N)] - BSA and Azide free (ab219598)

Immunoprecipitation of HeLa cells treated with Okadaic acid and Calyculin A (Lane 1) or PBS (Lane 2) labeling Smad2 (phospho S255) with [ab188334](#) at 1/50 dilution and Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1500 dilution

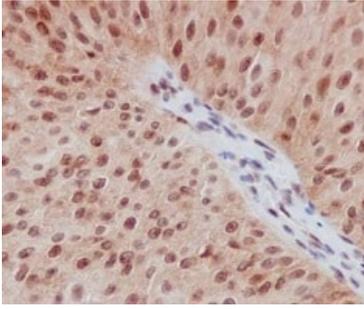
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab188334](#)).



Dot Blot - Anti-Smad2 (phospho S255) antibody [EPR2856(N)] - BSA and Azide free (ab219598)

Dot blot analysis of Smad2 (S255) phospho peptide (Lane 1), Smad2 non-phospho peptide (Lane 2), labelling Smad2 (S255) phospho peptide with [ab188334](#) at a dilution of 1:1000 dilution (1.365ug/ml). A Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated ([ab97051](#)) was used as the secondary antibody at a dilution of 1:20,000 dilution. Blocking buffer: 5% NFDm/TBST. Dilution buffer: 5% NFDm /TBST .

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab188334](#)).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Smad2 (phospho S255) antibody [EPR2856(N)] - BSA and Azide free (ab219598)

Immunohistochemical analysis of formalin fixed paraffin embedded Human transitional cell carcinoma of bladder labeling Smad2 (phospho S255) with [ab188334](#) at 1/100 dilution and HRP Polymer for Rabbit IgG. Counterstained with Hematoxylin.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab188334](#)).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Why choose a recombinant antibody?

 Research with confidence Consistent and reproducible results	 Long-term and scalable supply Recombinant technology
 Success from the first experiment Confirmed specificity	 Ethical standards compliant Animal-free production

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Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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