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# Polyclonal Anti-SMAD5 Antibody

Catalog Number: PA2115

## Description

| | |
|---|---|
| **Gene Name** | SMAD family member 5 |
| **Recommended Protein Name** | Mothers against decapentaplegic homolog 5 |
| **Lot No.** | 0211312c021548 |
| **Size** | 100μg/vial |
| **Form** | lyophilized |
| **Ig type** | Rabbit IgG |
| **Specificity** | No cross reactivity with other proteins. |
| **Purification** | Immunogen affinity purified. |
| **Species** | **Reacts with:** human, rat<br>**Predicted to work with**: mouse |
| **Immunogen** | A synthetic peptide corresponding to a sequence in the middle region of human SMAD5(248-267aa IPQIMPSISSRDVQPVAYEE), identical to the related rat sequence, and different from the related mouse sequence by one amino acid. |
| **Contents** | Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg $Na_2HPO_4$, 0.05mg Thimerosal, 0.05mg $NaN_3$. |

## Application

| | Concentration | Tested Species | Predicted Species | Antigen Retrieval |
|---|---|---|---|---|
| Western blot | 0.1-0.5μg/ml | Hu, Rat | Ms | - |
| Immunohistochemistry (Paraffin-embedded Section) | 0.5-1μg/ml | Hu, Rat | Ms | By Heat |

**WB: The detection limit for SMAD5 is approximately 1.5ng/lane under reducing conditions.**

**Tested Species:** In-house tested species with positive results.

**Predicted Species:** Species predicted to be fit for the product based on sequence similarities.

**By Heat: Boiling the paraffin sections in 10mM citrate buffer, pH6.0, for 20mins is required for the staining of formalin/paraffin sections.**

*Other applications have not been tested.*

*Optimal dilutions should be determined by end users.*

## Preparation and storage

**Reconstitution:** 0.2ml of distilled water will yield a concentration of 500μg/ml.

**Storage:** At -20˚C for one year. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for a longer time.
Avoid repeated freezing and thawing.

## Relevant detection systems

Boster provides a series of assays reacted with primary antibodies. Antibody can be supported by chemiluminescence kit EK1002 in WB, supported by SA1022 in IHC(P).

## Background

Mother against decapentaplegic homolog 5 also known as SMAD5 is a protein that in humans is encoded by the SAMD5 gene. It belongs to the SMAD family of proteins, which belong to the TGFβ superfamily of modulators. The gene was assigned to human chromosome 5q31. Like many other TGFβ family members SMAD5 is involved in cell signalling and modulates signals of bone morphogenetic proteins (BMP's). It may play a role in the pathway where TGFβ is an inhibitor of hematopoietic progenitor cells.

**Reference**


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2. Davis, B. N., Hilyard, A. C., Lagna, G., Hata, A. SMAD proteins control DROSHA-mediated microRNA maturation. Nature 454: 56-61, 2008.
3. Gemma, A., Hagiwara, K., Vincent, F., Ke, Y., Hancock, A. R., Nagashima, M., Bennett, W. P., Harris, C. C. hSmad5 gene, a human hSmad family member: its full length cDNA, genomic structure, promoter region and mutation analysis in human tumors. Oncogene 16: 951-956, 1998.
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