

Monoclonal Mouse  $IgG_{2B}$  Clone # 293039

Catalog Number: MAB2029

| DESCRIPTION        |  |  |  |
|--------------------|--|--|--|
| Species Reactivity | Human/Mouse/Rat  |  |  |
| Specificity        | Detects human, mouse, and rat Smad7.   |  |  |
| Source             | Monoclonal Mouse IgG <sub>2B</sub> Clone # 293039  |  |  |
| Purification       | Protein A or G purified from hybridoma culture supernatant   |  |  |
| Immunogen          | E. coli-derived recombinant human Smad7 Gly320-Ser398 Accession # O15105   |  |  |
| Formulation        | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS. |  |  |

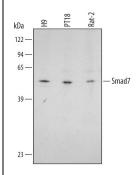
## **APPLICATIONS**

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

|                      | Recommended<br>Concentration | Sample    |
|----------------------|------------------------------|-----------|
| Western Blot         | 1 μg/mL                      | See Below |
| Immunohistochemistry | 8-25 μg/mL                   | See Below |

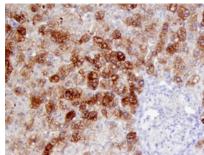
#### DATA

## Western Blot



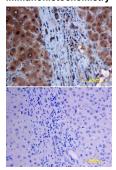
Detection of Human/Mouse/Rat Smad7 by Western Blot. Western blot shows lysates of H9 human cutaneous T lymphoma cell line, PT18 mouse mast/basophil cell line, and Rat-2 rat embryonic fibroblast cell line. PVDF membrane was probed with 1 µg/mL of Human/Mouse/Rat Smad7 Monoclonal Antibody (Catalog # MAB2029) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for Smad7 at approximately 50 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 2.

## Immunohistochemistry



Smad7 in Human Liver Cancer Tissue. Smad7 was detected in immersion fixed paraffinembedded sections of human liver cancer tissue using 25 µg/mL Human/Mouse/Rat Smad7 Monoclonal Antibody (Catalog # MAB2029) overnight at 4 °C. Tissue was stained with the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

# Immunohistochemistry



Smad7 in Human Liver. Smad7 was detected in immersion fixed paraffin-embedded sections of human liver array using Human/Mouse/Rat Smad7 Monoclonal Antibody (Catalog # MAB2029) at 25 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

## PREPARATION AND STORAGE

**Reconstitution** Reconstitute at 0.5 mg/mL in sterile PBS.

Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

\*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C

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- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

RED SYSTEMS<sup>®</sup>





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### BACKGROUND

Smads are a family of intracellular proteins that transmit transforming growth factor beta (TGF- $\beta$ ) superfamily signals from the cell surface to the nucleus. The Smad family is divided into three subclasses: receptor regulated Smads, (Smads 1, 2, 3, 5 and 8); the common partner, (Smad4) that functions via its interaction to the various Smads; and the inhibitory Smads, (Smads 6 and 7). Smad7, also known as Mothers Against Decapentaplegic homolog 7 (MADH7), inhibits selected pathways by binding directly to cell-surface receptors and preventing the activation-induced phosphorylation of other Smad subunits.

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