

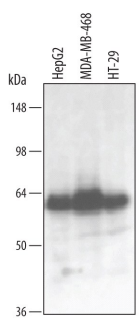
| DESCRIPTION | |
|---------------------------|--|
| Species Reactivity | Human |
| Specificity | Detects human Smad1 in direct ELISAs and Western blots. In direct ELISAs, approximately 15% cross-reactivity with recombinant human (rh) Smad5 is observed, and less than 5% cross-reactivity rhSmad4 and rhSmad9 is observed. |
| Source | Polyclonal Goat IgG |
| Purification | Antigen Affinity-purified |
| Immunogen | <i>E. coli</i> -derived recombinant human Smad1 Asn2-Met454 Accession # Q15797 |
| 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 Concentration | Sample |
|-----------------------------|---------------------------|-----------|
| Western Blot | 0.5 µg/mL | See Below |
| Immunohistochemistry | 5-15 µg/mL | See Below |
| Simple Western | 5 µg/mL | See Below |

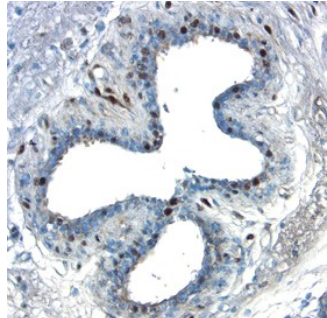
DATA

Western Blot



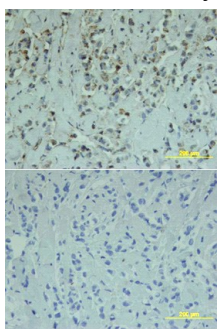
Detection of Human Smad1 by Western Blot. Western blot shows lysates of HepG2 human hepatocellular carcinoma cell line, MDA-MB-468 human breast cancer cell line, and HT-29 human colon adenocarcinoma cell line. PVDF membrane was probed with 0.5 µg/mL of Goat Anti-Human Smad1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2039) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). A specific band was detected for Smad1 at approximately 63 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



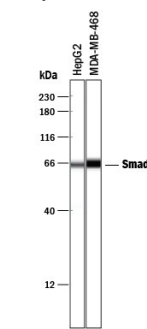
Smad1 in Human Breast Cancer Tissue. Smad1 was detected in immersion fixed paraffin-embedded sections of human breast cancer tissue using Goat Anti-Human Smad1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2039) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific labeling was localized to the nuclei of glandular epithelial cells. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

Immunohistochemistry




Smad1 in Human Breast. Smad1 was detected in immersion fixed paraffin-embedded sections of human breast array using Goat Anti-Human Smad1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2039) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) 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](#).

Simple Western



Detection of Human Smad1 by Simple Western™. Simple Western lane view shows lysates of HepG2 human hepatocellular carcinoma cell line and MDA-MB-468 human breast cancer cell line, loaded at 0.2 mg/mL. A specific band was detected for Smad1 at approximately 66 kDa (as indicated) using 5 µg/mL of Goat Anti-Human Smad1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2039) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



PREPARATION AND STORAGE

| | |
|--------------------------------|--|
| Reconstitution | Reconstitute at 0.2 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 |
| Stability & Storage | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 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. |

BACKGROUND

Smads are a family of intracellular proteins that transmit transforming growth factor beta (TGF- β) superfamily signals from the cell surface to the nucleus. Upon signaling by some BMP family members, Smad1 is phosphorylated resulting in its association with the common-mediator subunit, Smad4. This heteromeric complex then translocates into the nucleus to exert transcriptional comodulator activity.