

## DESCRIPTION

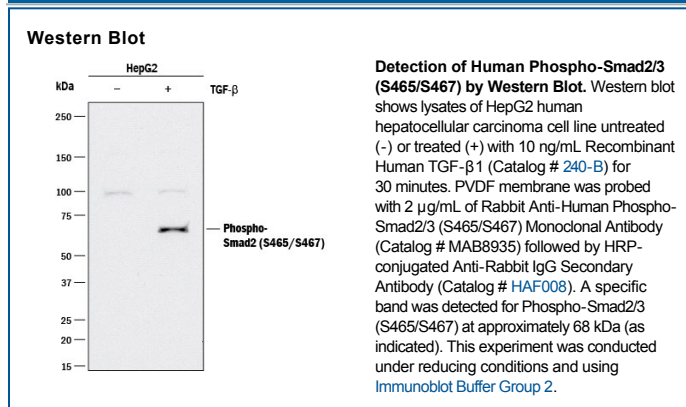
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Smad2/3 when dually phosphorylated at S465/S467 in Western blots.
<b>Source</b>	Recombinant Monoclonal Rabbit IgG Clone # 1074A
<b>Purification</b>	Protein A or G purified from cell culture supernatant
<b>Immunogen</b>	Phosphopeptide containing the human Smad2 S465/S467 site Accession # NP_005892
<b>Formulation</b>	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
<b>Western Blot</b>	2 µg/mL	See Below

## DATA



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Smad2 (Sma and MAD-related Protein 2), also known as MAD2, MADR2 and MADH2, is a 58-62 kDa member of the Dwarfin/SMAD family of proteins. It is widely expressed, particularly in striated muscle, and exists constitutively in the cytoplasm. Smad2 is a downstream mediator of TGF-β and activin signaling. In particular, Smad2 is a nonphosphorylated monomer in unstimulated cells. Upon ALK-4, -5, and -7 receptor activation, Smad2 is phosphorylated and forms either homotrimers or heterotrimers with Smad3 and Smad4. These heterotrimers enter the nucleus and initiate gene transcription. Human Smad2 is 467 amino acids (aa) in length. It contains one regulatory MH domain (aa 120-176) and a transactivation MH domain (aa 274-467). There are at least five utilized phosphorylation sites and one acetylation site at Lys19 that promotes transcriptional activity. There are four potential isoform variants. One shows a deletion of aa 79-108, while another contains the same deletion coupled to another deletion of aa 219-243. A third shows a deletion of aa 344-358, and a fourth is missing aa 221-225. Over aa 20-108, human Smad2 shares 98% aa identity with mouse Smad2.