

## DESCRIPTION

|                           |                                                                                                                                                                                                               |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                         |
| <b>Specificity</b>        | Detects human Smad2 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human Smad1, 3, 4, 5, 6, 7, or 8 is observed.                                                                    |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>2B</sub> Clone # 376520                                                                                                                                                             |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                    |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant human Smad2<br>Lys20-Thr108<br>Accession # Q15796                                                                                                                         |
| <b>Formulation</b>        | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS. |

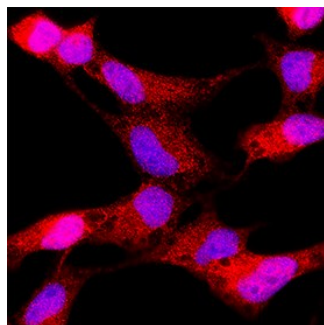
## APPLICATIONS

**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.

|                            | <b>Recommended Concentration</b> | <b>Sample</b>                                                      |
|----------------------------|----------------------------------|--------------------------------------------------------------------|
| <b>Immunocytochemistry</b> | 8-25 µg/mL                       | Immersion fixed HeLa human cervical epithelial carcinoma cell line |

## DATA

### Immunocytochemistry



**Smad2 in HeLa Human Cell Line.** Smad2 was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Mouse Anti-Human Smad2 Monoclonal Antibody (Catalog # MAB4037) at 25 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. Staining was performed using our protocol for Fluorescent ICC Staining of Non-adherent Cells.

## PREPARATION AND STORAGE

|                                |                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reconstitution</b>          | Reconstitute at 0.5 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.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C                                                                                                                 |
| <b>Stability &amp; Storage</b> | <b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <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 is a 52 kDa TGF-β receptor-regulated member of the Smad family. It is expressed most highly in skeletal muscle, heart and placenta. Receptor binding of TGF-β causes C-terminal phosphorylation of Smads 2 and 3. Smad is released from cytoplasmic anchoring, complexes with Smad4 and accumulates in the nucleus. After regulating expression, Smad2 is dephosphorylated and recycled. The 467 aa human Smad2 shows only two aa differences with mouse Smad2. About 10% of Smad2 expressed as a short, high-activity isoform missing aa 80-108 within the MH1 domain.