R&D Systems
Tools for Cell Biology Research™

Human Smad2 Antibody

Monoclonal Mouse IgG_{2B} Clone # 376520

Catalog Number: MAB4037

DESCRIPTION

Species Reactivity	Human
Specificity	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.
Source	Monoclonal Mouse IgG_{2B} Clone # 376520
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human Smad2 Lys20-Thr108 Accession # Q15796
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
Immunocytochemistry	8-25 µg/mL	Immersion fixed MCF-10A human breast epithelial cell line treated with recombinant human TGF-beta 1 (Catalog # 100-B-001)

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
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 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

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.

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