

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Smad2 in direct ELISAs.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human Smad2 Lys20-Thr108 Accession # Q15796
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.	

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.

Immunohistochemistry Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

SMAD2 (Sma and MAD-related protein 2; also 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.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc., and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.