

PRODUCT INFORMATION



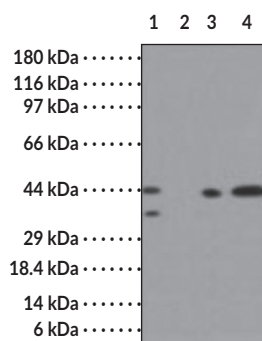
SMAD3 Polyclonal Antibody

Item No. 10832

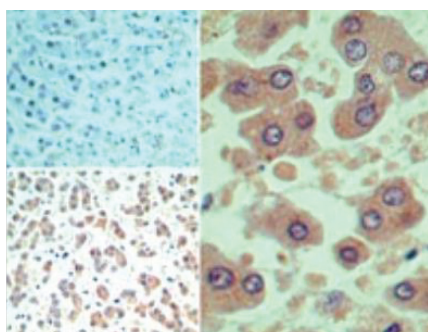
Overview and Properties

Contents: This vial contains 100 µg protein G-purified IgG.
Immunogen: A portion of amino acids 100-150 of human SMAD3
Species Reactivity: (+) Human, bovine, canine, mouse, porcine, primate, and rat
Form: Liquid
Storage: 4°C (as supplied); Aliquot before storing at -20°C. Avoid freeze/thaw cycles.
Stability: ≥6 months
Storage Buffer: PBS containing 0.05% sodium azide
Concentration: 1.0 mg/ml
Host: Rabbit
Applications: Immunofluorescence (IF), immunohistochemistry (IHC), and Western blot (WB); the recommended starting dilution for IF and IHC is 5 µg/ml and 0.5-2 µg/ml for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Lane 1: Human liver lysate (absence of immunizing peptide)
Lane 2: Human liver lysate (presence of immunizing peptide)
Lane 3: Mouse liver lysate (absent peptide)
Lane 4: Rat liver lysate (absent peptide)



Immunohistochemical analysis of SMAD3 in formalin-fixed, paraffin-embedded human liver tissue using an isotype control (top left) and SMAD3 (bottom left, right) at 5 µg/ml.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

SMAD3, a member of the SMAD family of proteins, is involved in the TGF- β signaling cascade. A human homolog of *Drosophila* Mad protein, SMAD3 consists of an N-terminal DNA-binding MH1 domain, a linker region and a C-terminal MH2 domain. It is a receptor-regulated SMAD (R-SMAD) that functions downstream of TGF- β and activin receptors and mediates their signaling.^{1,2} It is recruited by SMAD anchor for receptor activation (SARA) to the receptor kinase for phosphorylation. Upon phosphorylation, SMAD3 dissociates from SARA, forms a complex with SMAD4 and transmigrates into the nucleus where it complexes with other cofactors and acts as a transcription factor. It has an indispensable role in cell proliferation, differentiation, apoptosis and formation of ECM. Loss of SMAD3 results in childhood T cell leukemia.

References

1. Qin, B.Y., Suvana, S.L., Correia, J.J., *et al.* Smad3 allosterically links TGF- β receptor kinase activation to transcriptional control. *Genes Dev.* **16**, 1950-3 (2002).
2. Shi, Y. and Massaro, A.F. Mechanisms of TGF- β signaling from cell membrane to the nucleus. *Cell* **113**, 685-700 (2003).

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