Human Smad4 Antibody

Antigen Affinity-purified Polyclonal Goat IgG Catalog Number: AF2097

DESCRIPTION			
Species Reactivity	Human		
Specificity	Detects human Smad4 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 15% cross-reactivity with recombinant human (rh) Smad1 and less than 5% cross-reactivity with rhSmad9, rhSmad5, and rhSmad7 is observed.		
Source	Polyclonal Goat IgG		
Purification	Antigen Affinity-purified		
Immunogen	E. coli-derived recombinant human Smad4 Pro139-Asp332 Accession # Q13485		
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.		

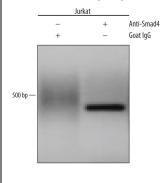
APPLICATIONS

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
Western Blot	0.1 μg/mL	Recombinant Human Smad4
Chromatin Immunoprecipitation (ChIP)	5 μg/5 x 10 ⁶ cells	See Below
Immunocytochemistry	5-15 μg/mL	Immersion fixed human peripheral blood mononuclear cells

DATA

Chromatin Immunoprecipitation (ChIP)



Detection of Smad4-regulated Genes by Chromatin Immunoprecipitation. Jurkat human acute T cell leukemia cell line treated with 10 ng/mL Recombinant Human IL-12 (Catalog # 219-IL) overnight was fixed using formaldehyde, resuspended in lysis buffer, and sonicated to shear chromatin. Smad4/DNA complexes were immunoprecipitated using 5μg Goat Anti-Human Smad4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2097) or control antibody (Catalog # AB-108-C) for 15 minutes in an ultrasonic bath, followed by Biotinylated Anti-Goat IgG Secondary Antibody (Catalog # BAF109). Immunocomplexes were captured using 50 µL of MagCellect Streptavidin Ferrofluid (Catalog # MAG999) and DNA was purified using chelating resin solution. The p21 promoter was detected by standard PCR.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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.

BACKGROUNI

Smads are a family of intracellular proteins that transmit transforming growth factor beta (TGF- β) superfamily signals from the cell surface to the nucleus. Upon signal-induced phosphorylation, Smad subunits associate with the common-mediator subunit, Smad4. This heteromeric complex then translocates into the nucleus to exert transcriptional comodulator activity.

