Product Information Sheet

Polyclonal Anti-Mothers against decapentaplegic homolog 2/3, ***SMAD2/3***

Lane 1 : Rat Heart tissue Lysate
Lane 2 : Rat skeletal muscle tissue Lysate
Lane 3 : Rat Kidney tissue Lysate
Lane 4 : Rat brain tissue Lysate
Lane 5 : MM453 Whole Cell Lysate
Lane 6 : MM231 Whole Cell Lysate
Lane 7 : Hela Whole Cell Lysate
Lane 8 : SMMC Whole Cell Lysate
Lane 9 : SW620 Whole Cell Lysate

Catalogue No. PA1073

Lot No. 03D01

Ig type: rabbit IgG

Size: 100µg/vial

Specificity

Human, mouse, rat.

No cross reactivity with other proteins.

Recommended application

Western blot

Immunohistochemistry(P)

Immunohistochemistry(F)

To reorder contact us at:

Antagene, Inc.

Toll Free: 1(866)964-2589

email: Info@antageneinc.com

Immunogen

A synthetic peptide corresponding to the N-terminal of human SMAD2/3, identical to the related mouse and rat sequence.

Purity

Immunogen affinity purified.

Application

Western blot

At 1-2µg/ml with the appropriate system to detect SMAD2/3 in cells and tissues.

Immunohistochemistry(P)

At 1-2µg/ml to detect SMAD2/3 in formalin fixed and paraffin embedded tissues.

Immunohistochemistry(F)

At 0.4-1µg/ml to detect SMAD2/3 in formalin or acetone fixed tissues.

Other applications have not been tested.

Optimal dilutions should be determined by end user.

Contents

Each vial contains 50% glycerol, 0.9mg NaCl, 0.2mg Na_2HPO_4.

Reconstitution

1.2% sodium acetate or neutral PBS. If 0.5ml of PBS is used, the antibody concentration will be 100µg/ml.

Storage

At -20˚C for one year. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for longer time.

BACKGROUND

SMAD proteins transmit signals from transmembrane serine/threonine kinase receptors to the nucleus. Transforming growth factor (TGF)-beta stimulation leads to phosphorylation and activation of Smad2 and Smad3, which form complexes with Smad4 that accumulate in the nucleus and regulate transcription of target genes. Smad2 and Smad3 share highly homology. SMAD2/SMAD3 signal transduction appeared to be important in the regulation of muscle-specific genes. SMAD proteins transmit signals from transmembrane serine/threonine kinase receptors to the nucleus. Smad2 is a 58 kDa member of a family of proteins involved in cell proliferation, differentiation and development.Smad3 is a 50 kDa member of a family of proteins that act as key mediators of TGF beta superfamily signaling in cell proliferation, differentiation and development.

REFERENCE

1. Riggins G.J., Thiagalingam S., Rosenblum E., Weinstein C.L., Kern S.E., Hamilton S.R., Willson J.K.V., Markowitz S.D., Kinzler K.W., Vogelstein B.V.;"Mad-related genes in the human.";
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2. Zhang Y., Feng X.-H., Wu R.-Y., Derynck R.;"Receptor-associated Mad homologues synergize as effectors of the TGF-beta response.";Nature 383:168-172(1996).

3 Inman, G. J.; Nicolas, F. J.; Hill, C. S. : Nucleocytoplasmic shuttling of Smads 2, 3, and 4 permits sensing of TGF-beta receptor activity. *Molec. Cell* 10: 283-294, 2002.