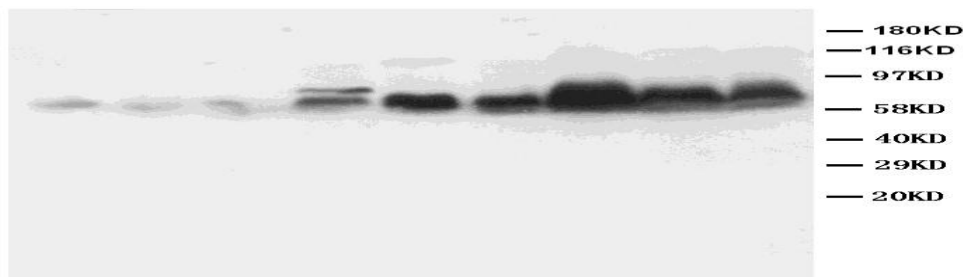




## Product Information Sheet

### 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)*

#### **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<sub>2</sub>HPO<sub>4</sub>.

#### **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.

**To reorder contact us at:**

**Antagene, Inc.**

**Toll Free: 1(866)964-2589**

**email: Info@antageneinc.com**

**FOR RESEARCH USE ONLY. NOT FOR DIAGNOSTIC AND CLINICAL USE.**

## 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."; Nat. Genet. 13:347-349(1996).
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.