



COSMO BIO CO., LTD.  
Inspiration for Life Science

## Cosmo Bio Co., Ltd

TOYO EKIMAE BLDG, 2-20, TOYO 2CHOME,  
KOTO-KU, TOKYO 135-0016, JAPAN  
TEL : +81-3-5632-9617  
FAX : +81-3-5632-9618  
URL : <http://www.cosmobio.co.jp/>  
e-mail : [export@cosmobio.co.jp](mailto:export@cosmobio.co.jp)

国内連絡先

TEL : 03-5632-9610  
FAX : 03-5632-9619

Catalog No. **CBX00479**

Mouse monoclonal antibody

**Anti-Human SMAD1**

### ■ Formulation

Mouse monoclonal anti-human **SMAD1** antibody  
in PBS (3.0 mM KCl, 1.5 mM  $\text{KH}_2\text{PO}_4$ ,  
140 mM NaCl, 8.0 mM  $\text{Na}_2\text{HPO}_4$  (pH 7.4))  
containing 1% bovine serum albumin (BSA)  
and 0.05% sodium azide ( $\text{NaN}_3$ ).

### ■ Antibody concentration

100  $\mu\text{g}/\text{ml}$  (1.0 ml)

### ■ Storage

Store at 2-8°C for up to one year.  
We recommend storing at -20°C for long-term storage.  
Avoid repeat freezing and thawing cycles.

### ■ Preparation

This antibody was purified using protein G column  
chromatography from culture supernatant of hybridoma  
cultured in a medium containing bovine IgG-depleted  
(approximately 95%) fetal bovine serum.

### ■ Sterility

Filtered through a 0.22  $\mu\text{m}$  membrane.

### ■ Applications

WB, IP, IC, Dot Blot, FC

### ■ Disposal

This antibody solution contains sodium azide ( $\text{NaN}_3$ )  
as a preservative. There is a potential hazard that  
 $\text{NaN}_3$  reacts with copper or lead to produce an expl-  
osive compound. For safe disposal, the vial has to  
be washed thoroughly with water.

### ■ Safety warnings and precautions

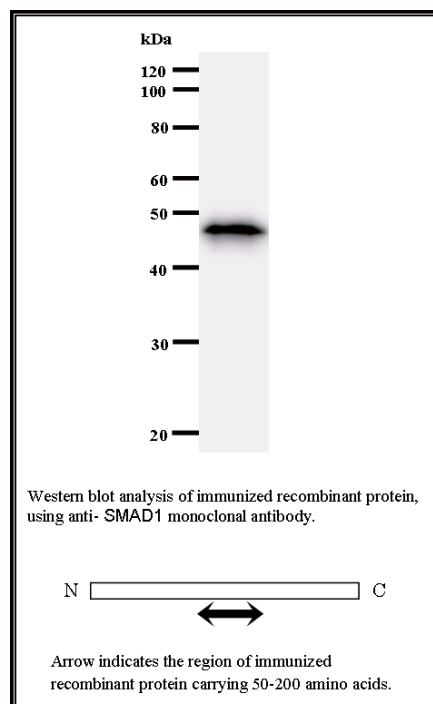
Caution must be taken to avoid contact with skin or eyes. In such a case, rinse thoroughly at once with water.  
Do not ingest, inhale, or swallow. Seek medical attention immediately.  
Wear appropriate protective clothing such as laboratory overalls, safety glasses and gloves.  
It is strongly advised that this product should be handled by people who have been well trained in  
laboratory techniques and that it is handled with care pursuant to the principles of good laboratory practice.  
All chemicals are deemed potentially harmful.  
The vial is prone to fall over. Use caution, especially when the lid is off.

Lot No. **913C1b-1**

Clone No. **913C1b**

Antibody class : **IgG1**

Immunogen : Recombinant



FOR RESEARCH USE ONLY, NOT FOR USE IN DIAGNOSTIC PROCEDURES.

manufactured by BMR

Catalog No. CBX00479

Mouse monoclonal antibody

Anti-Human SMAD1

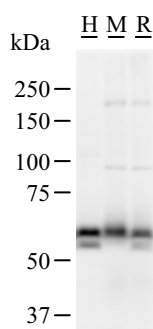
## Background

The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene products of the *Drosophila* gene 'mothers against decapentaplegic' (Mad) and the *C. elegans* gene Sma. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. This protein mediates the signals of the bone morphogenetic proteins (BMPs), which are involved in a range of biological activities including cell growth, apoptosis, morphogenesis, development and immune responses. In response to BMP ligands, this protein can be phosphorylated and activated by the BMP receptor kinase. The phosphorylated form of this protein forms a complex with SMAD4, which is important for its function in the transcription regulation. This protein is a target for SMAD-specific E3 ubiquitin ligases, such as SMURF1 and SMURF2, and undergoes ubiquitination and proteasome-mediated degradation. Alternatively spliced transcript variants encoding the same protein have been observed. [NCBI Entrez Gene Summary]

## Recommended condition

WB: 0.2-2 µg/ml IP: 100-500 µg/sample FC: 0.5-2 µg/sample IC: 2-100 µg/ml

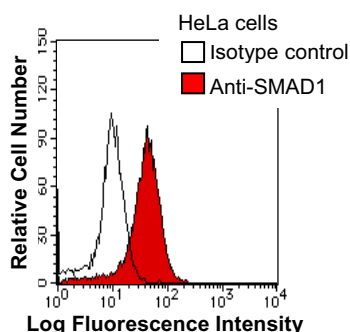
## Application



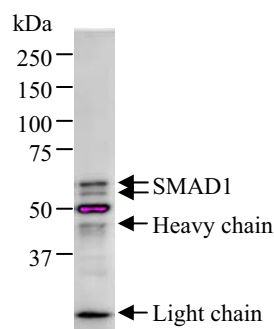
Detection of SMAD1 by Western blot.

Samples: Whole cell lysate from human HEK293 (H, 25 µg), mouse NIH3T3 (M, 25 µg) and rat F2408 (R, 25 µg) cells. [Lot No. 913C1b-1]

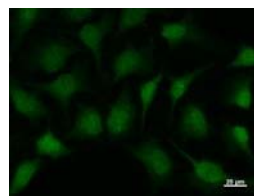
Predicted molecular weight: 52 kDa



HeLa cells were fixed in 2% paraformaldehyde/PBS and then permeabilized in 90% methanol. Cells were stained with anti-SMAD1 mAb (shaded) or isotype control (unshaded) followed by Alexa Fluor® 488-conjugated goat anti-mouse IgG. [Lot No. 913C1b-1]



Immunoprecipitation: RIPA lysate of HeLa cells was incubated with anti-SMAD1 mAb. [Lot No. 913C1b-1]



Immunostaining analysis in HeLa cells. HeLa cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100 in PBS. The cells were immunostained with anti-SMAD1 mAb. [Lot No. 913C1b-1]