



Rabbit Anti-phospho-Smad2 (Ser250) antibody

SL7464R

Product Name:	phospho-Smad2 (Ser250)
Chinese Name:	磷酸化细胞Signal transduction分子SMAD2抗体
Alias:	Smad2 (phospho S250); p-Smad2 (phospho S250); hMAD 2; hMAD 3; hSMAD2; hSMAD3; Mad related protein 2; MADH2; MADH3; MADR2; Mothers against DPP homolog 2; Mothers against DPP homolog 3; Sma and Mad related protein 2; SMA and MAD related protein 3; SMAD 2; SMAD 3; SMAD family member 2; SMAD family member 3.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,
Applications:	WB=1:500-2000ELISA=1:500-1000Flow-Cyt=1µg/Test not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	58kDa
Cellular localization:	The nucleuscytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthesised phosphopeptide derived from human Smad2 around the phosphorylation site of Ser250:EL(p-S)PT
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	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 signal of the transforming growth factor (TGF)-beta, and thus regulates multiple cellular processes, such as cell proliferation, apoptosis, and differentiation. This protein is recruited to the TGF-beta receptors through its interaction with the SMAD anchor for receptor activation (SARA) protein. In response to TGF-beta signal, this protein is phosphorylated by the TGF-beta receptors. The phosphorylation induces the dissociation of this protein with SARA and the association with the family member SMAD4. The association with SMAD4 is important for the translocation of this protein into the nucleus, where it binds to target promoters and forms a transcription repressor complex with other cofactors. This protein can also be phosphorylated by activin type 1 receptor kinase, and mediates the signal from the activin. Alternatively spliced transcript variants have been observed for this gene. [provided by RefSeq, May 2012]

Function:

Receptor-regulated SMAD (R-SMAD) that is an intracellular signal transducer and transcriptional modulator activated by TGF-beta (transforming growth factor) and activin type 1 receptor kinases. Binds the TRE element in the promoter region of many genes that are regulated by TGF-beta and, on formation of the SMAD2/SMAD4 complex, activates transcription. May act as a tumor suppressor in colorectal carcinoma.

Subcellular Location:

Cytoplasm. Nucleus. Cytoplasmic and nuclear in the absence of TGF-beta. On TGF-beta stimulation, migrates to the nucleus when complexed with SMAD4. On dephosphorylation by phosphatase PPM1A, released from the SMAD2/SMAD4 complex, and exported out of the nucleus by interaction with RANBP1.

Tissue Specificity:

Expressed at high levels in skeletal muscle, heart and placenta.

Post-translational modifications:

Phosphorylated on one or several of Thr-220, Ser-245, Ser-250, and Ser-255. In response to TGF-beta, phosphorylated on Ser-465/467 by TGF-beta and activin type 1 receptor kinases. Able to interact with SMURF2 when phosphorylated on Ser-465/467, recruiting other proteins, such as SNON, for degradation. In response to decorin, the naturally occurring inhibitor of TGF-beta signaling, phosphorylated on Ser-240 by CaMK2. Phosphorylated by MAPK3 upon EGF stimulation; which increases transcriptional activity and stability, and is blocked by calmodulin.

In response to TGF-beta, ubiquitinated by NEDD4L; which promotes its degradation. Acetylated on Lys-19 by coactivators in response to TGF-beta signaling, which increases transcriptional activity. Isoform short: Acetylation increases DNA binding activity in vitro and enhances its association with target promoters in vivo. Acetylation in the nucleus by EP300 is enhanced by TGF-beta.

Similarity:

Belongs to the dwarfin/SMAD family.

Contains 1 MH1 (MAD homology 1) domain.
Contains 1 MH2 (MAD homology 2) domain.

SWISS:
Q15796

Gene ID:
4087

Database links:

[Entrez Gene: 4087](#) Human

[Entrez Gene: 17126](#) Mouse

[Entrez Gene: 29357](#) Rat

[Omim: 601366](#) Human

[SwissProt: Q15796](#) Human

[SwissProt: Q62432](#) Mouse

[SwissProt: O70436](#) Rat

[Unigene: 12253](#) Human

[Unigene: 705764](#) Human

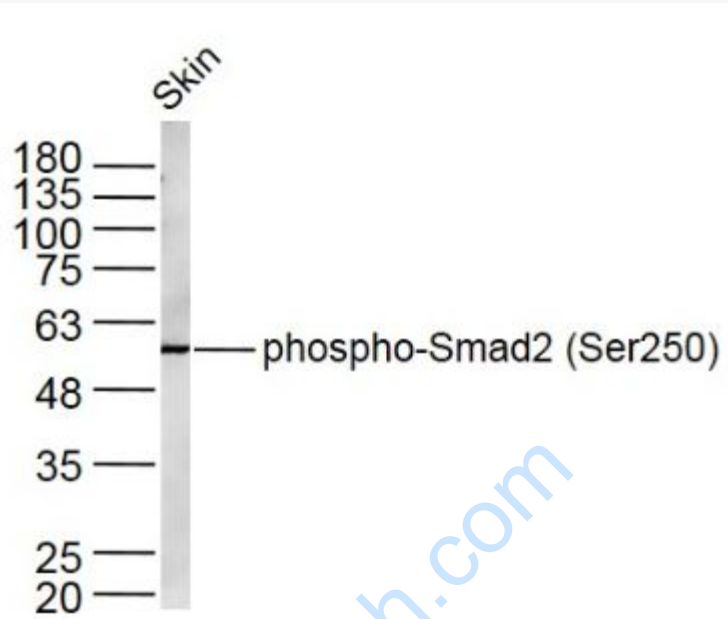
[Unigene: 391091](#) Mouse

[Unigene: 2755](#) Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Picture:



Sample:

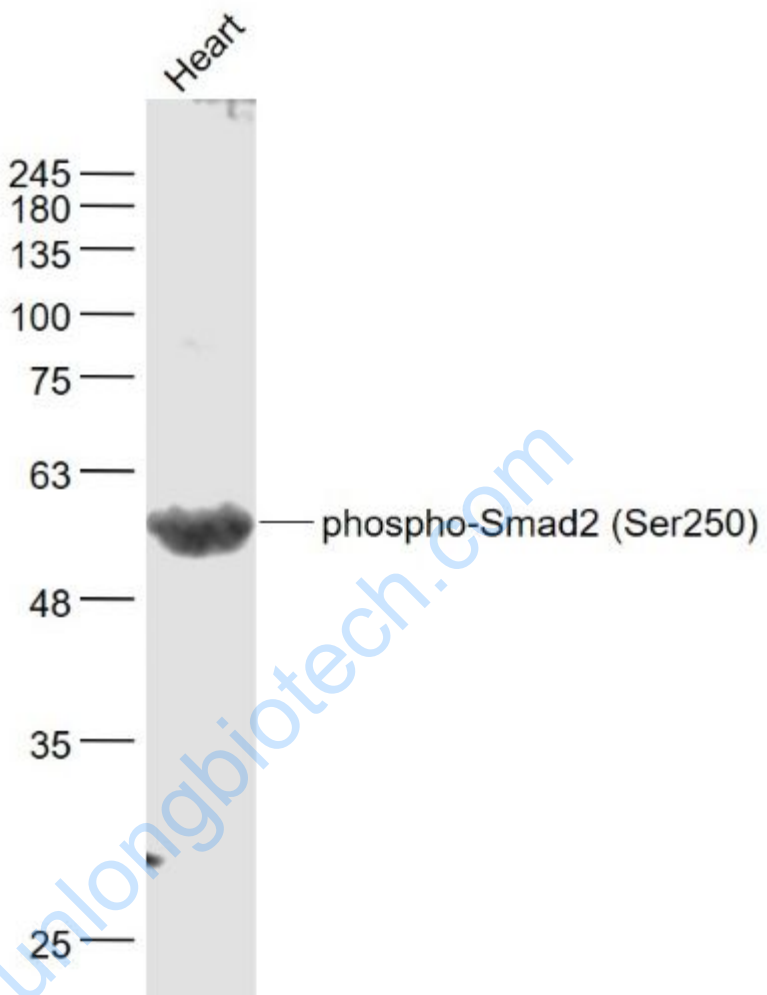
Skin (Mouse) Lysate at 40 ug

Primary: Anti-phospho-Smad2 (Ser250) (SL7464R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 58 kD

Observed band size: 58 kD



Sample:

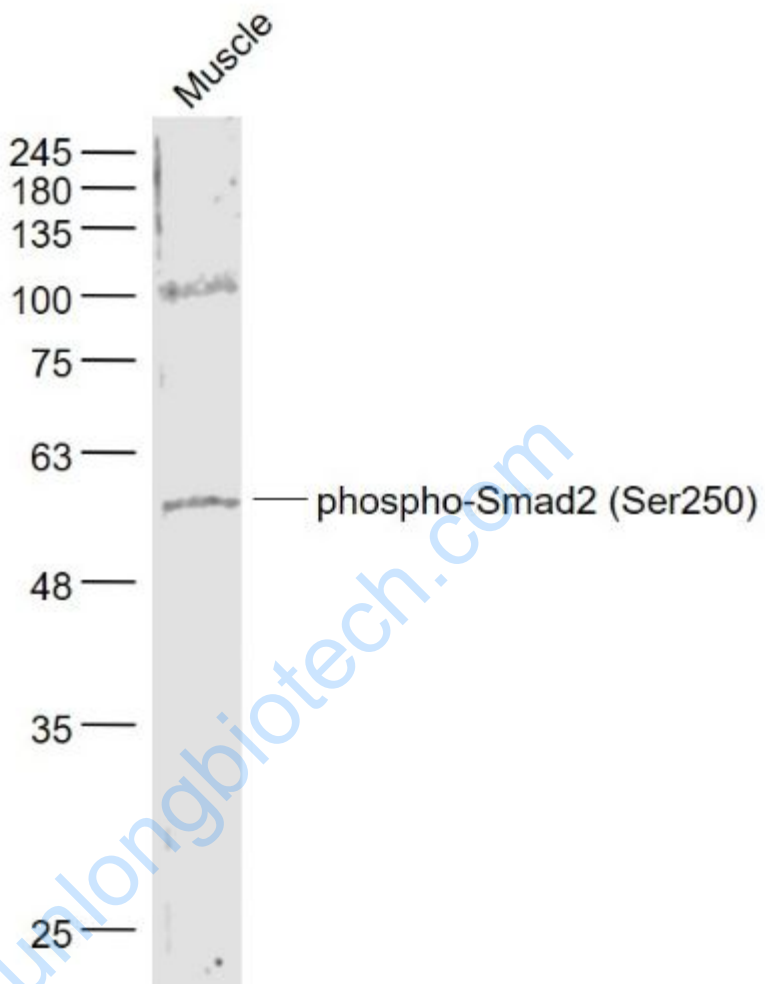
Heart (Mouse) Lysate at 40 ug

Primary: Anti- phospho-Smad2 (Ser250) (SL7464R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 58 kD

Observed band size: 58 kD



Sample:

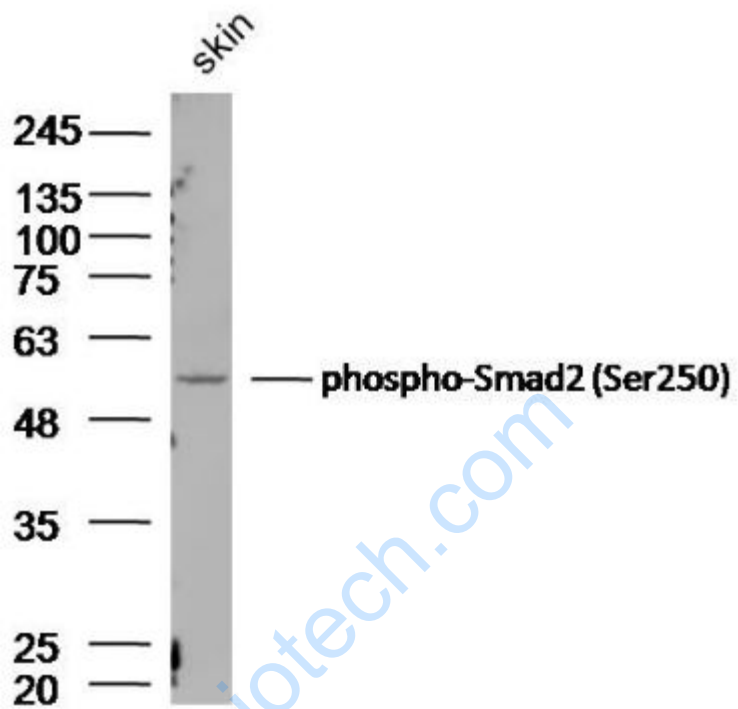
Muscle (Mouse) Lysate at 40 ug

Primary: Anti- phospho-Smad2 (Ser250) (SL7464R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 58 kD

Observed band size: 58 kD



Sample:

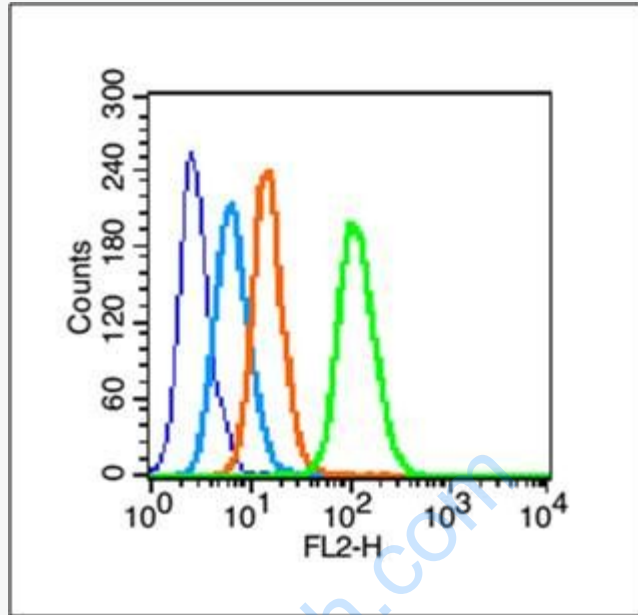
Skin (Mouse) Lysate at 40 ug

Primary: Anti-phospho-Smad2 (SL7464R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 58 kD

Observed band size: 58 kD



Blank control (blue line): HepG2 (fixed with 70% methanol (Overnight at 4°C) and then permeabilized with 90% ice-cold methanol for 20 min at -20°C).

Primary Antibody (green line): Rabbit Anti-phospho-Smad2 (Ser250) antibody (SL7464R), Dilution: 0.2µg / 10⁶ cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody (white blue line): Goat anti-rabbit IgG-PE, Dilution: 1µg /test.