

## Anti-SMAD2 Antibody (4E515)

## Product Details

Ig Type:	IgG
Reactivity:	Human,Mouse,Rat
Molecular Weight:	Theoretical: 52 kDa. Actual: 60 kDa.
Clone:	4E515
Purification:	Protein A purified

## Applications

1. Blank control: A431. Primary Antibody (green line): Rabbit Anti-Smad2 antibody (TMAB-01737)

Dilution: 1  $\mu\text{g}/10^6$  cells;

Isotype Control Antibody (orange line): Rabbit IgG.

Secondary Antibody: Goat anti-rabbit IgG-AF488

Dilution: 1  $\mu\text{g}/\text{test}$ .

Protocol

The cells were fixed with 4% PFA (10 min at room temperature) and then permeabilized with 90% ice-cold methanol for 20 min at  $-20^\circ\text{C}$ . The cells were then incubated in 5% BSA to block non-specific protein-protein interactions for 30 min at room temperature. Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature.

2. The HeLa (H) cells were fixed with 4% PFA (10 min at room temperature) and then permeabilized with 90% ice-cold methanol for 20 min at  $-20^\circ\text{C}$ , the cells then were incubated in 5% BSA to block non-specific protein-protein interactions (30 min at room temperature).

Primary Antibody (green): Rabbit Anti-Smad2 antibody (TMAB-01737): 1  $\mu\text{g}/10^6$  cells;

Secondary Antibody (white blue): Goat anti-Rabbit IgG-FITC: 1  $\mu\text{g}/\text{test}$ . Isotype Control (orange): Rabbit IgG. Blank control (black): PBS.

Verified Activity:

3. Paraformaldehyde-fixed, paraffin embedded Mouse Cerebrum; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with Smad2 Monoclonal Antibody, Unconjugated (TMAB-01737) at 1:200 overnight at  $4^\circ\text{C}$ , followed by conjugation to the secondary antibody and DAB staining.

4. Paraformaldehyde-fixed, paraffin embedded Rat Cerebrum; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with Smad2 Monoclonal Antibody, Unconjugated (TMAB-01737) at 1:200 overnight at  $4^\circ\text{C}$ , followed by conjugation to the secondary antibody and DAB staining.

5. Paraformaldehyde-fixed, paraffin embedded Human Cerebrum; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with Smad2 Monoclonal Antibody, Unconjugated (TMAB-01737) at 1:200 overnight at  $4^\circ\text{C}$ , followed by conjugation to the secondary antibody and DAB staining.

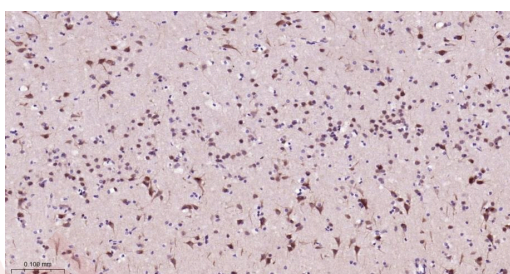
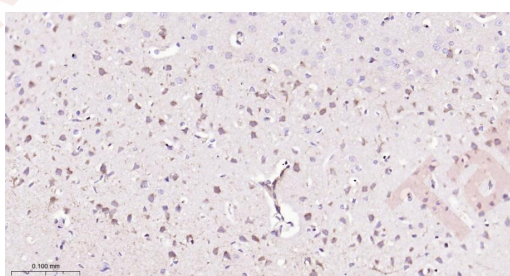
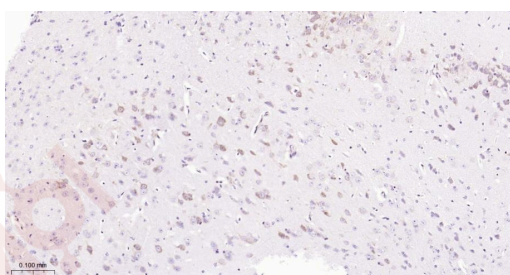
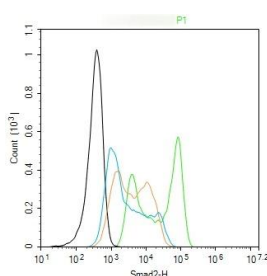
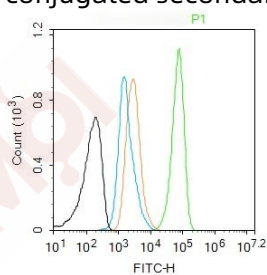
6. Paraformaldehyde-fixed, paraffin embedded Mouse Cerebellum; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with Smad2 Monoclonal Antibody, Unconjugated (TMAB-01737) at 1:200 overnight at  $4^\circ\text{C}$ , followed by conjugation to the secondary antibody and DAB staining.

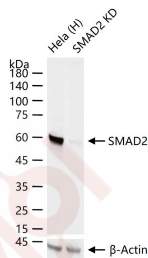
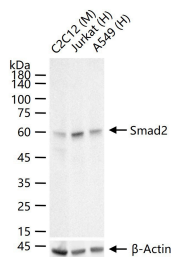
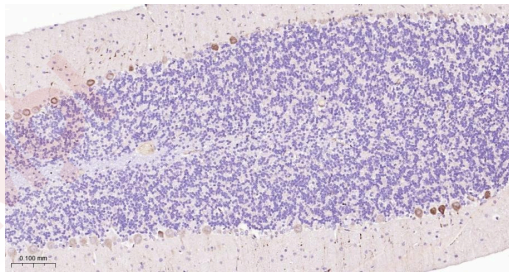
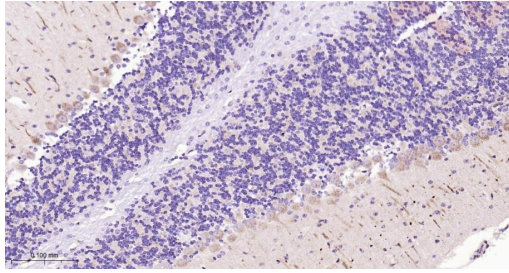
7. Paraformaldehyde-fixed, paraffin embedded Rat Cerebellum; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with Smad2 Monoclonal

Antibody, Unconjugated (TMAB-01737) at 1:200 overnight at 4°C, followed by conjugation to the secondary antibody and DAB staining.

8. 25 µg total protein per Lane of various lysates probed with Smad2 monoclonal antibody, unconjugated (TMAB-01737) at 1:1000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at RT for 60 min.

9. 25 µg total protein per Lane of various lysates probed with SMAD2 monoclonal antibody, unconjugated (TMAB-01737) at 1:1000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at RT for 60 min.





Application: FCM, ICC/IF, IF, IHC-Fr, IHC-P, WB

Recommended WB: 1:500-2000; IHC-P: 1:50-200; IHC-Fr: 1:50-200; ICC/IF: 1:50-200; IF: 1:50-200; FCM: 1ug/Test

### Properties

Stability & Storage: Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.

Shipping: Shipping with blue ice.

### Antigen Details

Immunogen: A synthesized peptide: human SMAD2

Antigen Species: Human

Gene ID: 4087

Uniprot ID: Q15796

Synonyms: JV18-1; SMAD family member 2 (SMAD 2; Smad2; hSMAD2); MADR2; SMAD2; MADH2; Mothers against DPP homolog 2; MAD homolog 2; Mad-related protein 2 (hMAD-2); Mothers against decapentaplegic homolog 2

Biology Area: TGF, SMADs, SMADs, Cytoplasmic

### Research 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 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]

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