#3122 Store at -20°C

Smad2 (86F7) Rabbit mAb

**Background:** Members of the Smad family of signal transduction molecules are components of a critical intracellular pathway that transmits TGF-β signals from the cell surface into the nucleus. Three distinct classes of Smads have been defined: the receptor-regulated Smads (R-Smads), which include Smad1, 2, 3, 5 and 8, the common-mediator Smad (co-Smad), Smad4, and the antagonistic or inhibitory Smads (I-Smads), Smad6 and 7 (1-5). Activated type I receptors associate with specific R-Smads and phosphorylate them on a conserved carboxy-terminal SSXS motif. The phosphorylated R-Smad dissociates from the receptor and forms a heteromeric complex with the co-Smad (Smad4), allowing translocation of the complex to the nucleus. Once in the nucleus, Smads can target a variety of DNA binding proteins to regulate transcriptional responses (6-8).

**Specificity/Sensitivity:** Smad2 (86F7) Rabbit mAb detects endogenous levels of total Smad2 protein. No cross reactivity was detected with Smad3.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Trp85 of human Smad2.

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<th>Applications</th>
<th>Species Cross-Reactivity*</th>
<th>Molecular Wt.</th>
<th>Isotype</th>
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<tr>
<td>W, IP, IF-IC</td>
<td>H, Mk</td>
<td>60 kDa</td>
<td>Rabbit IgG**</td>
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**Recommended Antibody Dilutions:**
- Western blotting: 1:1000
- Immunoprecipitation: 1:100
- Immunofluorescence (IF-IC): 1:400

**For application specific protocols please see the web page for this product at www.cellsignal.com.**

**Background References:**

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at −20°C. Do not aliquot the antibody.

**Species cross-reactivity is determined by western blot.**

**Anti-rabbit secondary antibodies must be used to detect this antibody.**

For Research Use Only. Not For Use In Diagnostic Procedures.

## Applications Species Cross-Reactivity Key:
- **W**—Western
- **IP**—Immunoprecipitation
- **HC**—Immunohistochemistry
- **ChIP**—Chromatin Immunoprecipitation
- **IF**—Immunofluorescence
- **F**—Flow cytometry
- **E-P**—ELISA-Peptide

**Species Cross-Reactivity Key:**
- **H**—human
- **M**—mouse
- **R**—rat
- **Ham**—hamster
- **Mik**—monkey
- **M**—mink
- **C**—chicken
- **Dm**—D. melanogaster
- **X**—Xenopus
- **Z**—zebrafish
- **B**—bovine
- **Dg**—dog
- **Pg**—pig
- **Sc**—S. cerevisiae
- **Ce**—C. elegans
- **Hr**—horse
- **All**—all species expected
- Species enclosed in parentheses are predicted to react based on 100% homology.

**IMPORTANT:** For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

Confocal immunofluorescent analysis of HeLa cells, untreated (left) or TGF-β treated (right), using Smad2 (86F7) Rabbit mAb (green). Actin filaments have been labeled with Alexa Fluor® 555 phalloidin (red).

Western blot analysis of extracts from HeLa, H1975 and HT29 cell lines, using Smad2 (86F7) Rabbit mAb.

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