Revision 2

Store at -20C

#12656

# SMAD 1/5/9 Antibody Sampler Kit

1 Kit (6 x 20 microliters)

Cell Signaling TECHNOLOGY®

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

| Product Includes | Product # | Quantity | Mol. Wt | Isotype/Source |
|---|---|---|---|---|
| Phospho-SMAD1 (Ser463/465)/ SMAD5 (Ser463/465)/ SMAD9 (Ser465/467) (D5B10) Rabbit mAb | 13820 | 20 µl | 60 kDa | Rabbit IgG |
| Phospho-SMAD1/5 (Ser463/465) (41D10) Rabbit mAb | 9516 | 20 µl | 60 kDa | Rabbit |
| Phospho-SMAD1 (Ser206) (D40B7) Rabbit mAb | 5753 | 20 µl | 60 kDa | Rabbit IgG |
| SMAD1 (D59D7) XP® Rabbit mAb | 6944 | 20 µl | 60 kDa | Rabbit IgG |
| SMAD4 (D3M6U) Rabbit mAb | 38454 | 20 µl | 70 kDa | Rabbit IgG |
| SMAD5 (D4G2) Rabbit mAb | 12534 | 20 µl | 60 kDa | Rabbit IgG |
| Anti-rabbit IgG, HRP-linked Antibody | 7074 | 100 µl | | Goat |

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

## Description

The SMAD1/5/9 Antibody Sampler Kit provides an economical means of detecting target proteins of the BMP signaling pathway. The kit includes enough antibody to perform two western blots with each primary antibody.

## Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

## Background

Transforming growth factor-β (TGF-β) superfamily signaling plays a critical role in the regulation of cell growth, differentiation, and development in a wide range of biological systems. In general, signaling is initiated with ligand-induced oligomerization of serine/ threonine receptor kinases and phosphorylation of the cytoplasmic signaling molecules Smad2 and Smad3 for the TGF-β/activin pathway, or Smad1/5/9 for the bone morphogenetic protein (BMP) pathway. Carboxy-terminal phosphorylation of Smads by activated receptors results in their partnering with the common signaling transducer Smad4, and translocation to the nucleus. Activated Smads regulate diverse biological effects by partnering with transcription factors resulting in cell-state specific modulation of transcription (1-7) .

## Background References

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2. Ikushima, H. and Miyazono, K. (2010) *Nat Rev Cancer* 10, 415-24.
3. Kitisin, K. et al. (2007) *Sci STKE* 2007, cm1.
4. Schmierer, B. and Hill, C.S. (2007) *Nat Rev Mol Cell Biol* 8, 970-82.
5. Whitman, M. (1998) *Genes Dev* 12, 2445-62.
6. Sapkota, G. et al. (2007) *Mol Cell* 25, 441-54.
7. Alarcón, C. et al. (2009) *Cell* 139, 757-69.

## Trademarks and Patents



## Limited Uses

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