

Product datasheet for **TA319240**

SMAD1 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	ELISA: 1:5,000 - 1:25,000, WB: 1:500 - 1:2,000
Reactivity:	Human, Mouse, Rat, Dog
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a phosphorylated synthetic peptide corresponding to the region of amino acids containing serine 206 of human SMAD1 protein.
Formulation:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Concentration:	lot specific
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	SMAD family member 1
Database Link:	NP_001003688 Entrez Gene 17125 Mouse Entrez Gene 25671 Rat Entrez Gene 475456 Dog Entrez Gene 4086 Human Q15797
Synonyms:	BSP-1; BSP1; JV4-1; JV41; MADH1; MADR1



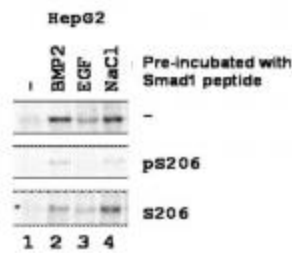
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Note: SMAD1 is also known Mothers Against Decapentaplegic homolog 1, Mothers against DPP homolog 1, hSMAD-3, JV4-1, Transforming growth factor-Beta-Signaling Protein 1 or BSP1. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. SMAD1, as a transcriptional modulator, is activated by BMP (Bone Morphogenetic Protein) type 1 receptor kinase (it is a receptor-regulated SMAD or R-SMAD). BMPs are involved in a range of biological activities including cell growth, apoptosis, morphogenesis, development and immune responses. SMAD proteins have been implicated as downstream effectors of TGF beta/BMP signaling. In response to BMP ligands, SMAD1 can be phosphorylated (other sites besides the most prominent of S206, are S187, S195, and S214). S-206 is phosphorylated by ERK in response to mitogenic growth factors, or by recombinant ERK in vitro; this can be tested by treating cells with EGF or in cancer cells where Ras is activated. The phosphorylated form of this protein forms a complex with SMAD4, which is important for its function in the transcription regulation. This protein is also a target for SMAD-specific E3 ubiquitin ligases, such as SMURF1 and SMURF2, and undergoes ubiquitination and proteasome-mediated degradation.

Protein Families: Cancer stem cells, Druggable Genome, ES Cell Differentiation/IPS, Stem cell relevant signaling - JAK/STAT signaling pathway, Stem cell relevant signaling - TGFb/BMP signaling pathway, Transcription Factors

Protein Pathways: TGF-beta signaling pathway

Product images:



WB using Anti-SMAD1 pS206 antibody shows detection of endogenous phosphorylated SMAD1 in whole cell lysates from HEPG2 (lanes 1-4) derived cell lines treated with PBS, BMP2 (5ng/mL), EGF (1ng/mL), or NaCl for 1h at 37°C before harvest. Primary antibody was used at 1:500 and pre-incubated before reacting with blot as follows: top row - with PBS, middle row - with the immunizing phosphorylated peptide and bottom row - with control or non-phosphorylated peptide. HRP-conjugated-Rabbit IgG was 1:3,000.