

Product datasheet for **TA332472**

SMAD5 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	WB 1:500 - 1:2000
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	A synthetic peptide of human SMAD5
Formulation:	Store at -20°C (regular) and -80°C (long term). Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Concentration:	lot specific
Purification:	Affinity purification
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	52 kDa
Gene Name:	SMAD family member 5
Database Link:	NP_005894 Entrez Gene 17129 Mouse Entrez Gene 59328 Rat Entrez Gene 4090 Human Q99717



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Background:

Bone morphogenetic proteins (BMPs) constitute a large family of signaling molecules that regulate a wide range of critical processes including morphogenesis, cell-fate determination, proliferation, differentiation, and apoptosis (1,2). BMP receptors are members of the TGF- β family of Ser/Thr kinase receptors. Ligand binding induces multimerization, autophosphorylation, and activation of these receptors (3-5). They subsequently phosphorylate Smad1 at Ser463 and Ser465 in the carboxy-terminal motif SSXS, as well as Smad5 and Smad8 at their corresponding sites. These phosphorylated Smads dimerize with the coactivating Smad4 and translocate to the nucleus, where they stimulate transcription of target genes (5). MAP kinases and CDKs 8 and 9 phosphorylate residues in the linker region of Smad1, including Ser206. The phosphorylation of Ser206 recruits Smurf1 to the linker region and leads to the degradation of Smad1 (6). Phosphorylation of this site also promotes Smad1 transcriptional action by recruiting YAP to the linker region (7).

Synonyms:

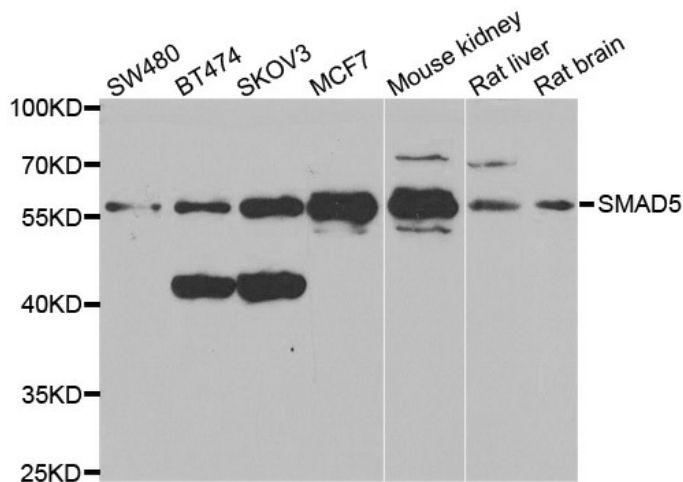
DWFC; JV5-1; MADH5

Protein Families:

Cancer stem cells, Druggable Genome, ES Cell Differentiation/IPS, Stem cell relevant signaling - JAK/STAT signaling pathway, Stem cell relevant signaling - TGF β /BMP signaling pathway, Transcription Factors

Protein Pathways:

TGF-beta signaling pathway

Product images:

Western blot analysis of extracts of various cell lines, using SMAD5 antibody.