

## Product datasheet for **TP304604M**

### SMAD2 (NM\_005901) Human Recombinant Protein

#### Product data:

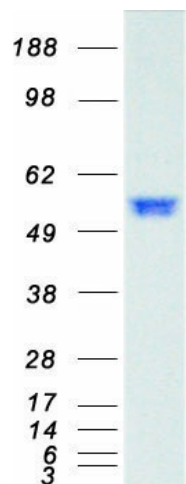
<b>Product Type:</b>	Recombinant Proteins
<b>Description:</b>	Recombinant protein of human SMAD family member 2 (SMAD2), transcript variant 1, 100 µg
<b>Species:</b>	Human
<b>Expression Host:</b>	HEK293T
<b>Expression cDNA Clone or AA Sequence:</b>	>RC204604 representing NM_005901 <b>Red</b> =Cloning site <b>Green</b> =Tags(s)
	MSSILPFTPPVVKRLLGWKKSAGGSGGAGGGEQNGQEEKWCEKAVKSLVKKLKKKTGRLDELEKAITTQNC NTKCVTIPSTCSEIWGLSTPNTIDQWDTTGLYSFSEQTRSLDGRLQVSHRKGPHVIYCRLWRWPDLHSH HELKAIENCEYAFNLKKDEVCVNPHYHYQRVETPVLPPVLPVPRHTEILTELPPLDDYTHSIPENTNFPAGI EPQSNYIPETPPPGYISEDGETSDQQLNQSMDTGSPAELSPPTLSPVNHSLDLQPVTYSEPAFWCSIAYY ELNQRVGETFHASQPSLTVDGFTDPSNSERFCLGLLSNVNRNATVEMTRRHIGRGRVRLYIGGEVFAECL SDSAIFVQSPNCNQRYGWHPATVCKIPPGCNLKIFNNEFAALLAQSVNQGFQAVYQLTRMCTIRMSFVK GWGAEYRRQTVTSTPCWIELHLNGPLQWLDKVLTKMGSPSVRCSSMS
	<b>TRTRPLEQKLISEEDLAANDILDYKDDDDKV</b>
<b>Tag:</b>	C-Myc/DDK
<b>Predicted MW:</b>	52.1 kDa
<b>Concentration:</b>	>0.05 µg/µL as determined by microplate BCA method
<b>Purity:</b>	> 80% as determined by SDS-PAGE and Coomassie blue staining
<b>Buffer:</b>	25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol
<b>Bioactivity:</b>	Co-immunoprecipitation (PMID: <a href="https://pubmed.ncbi.nlm.nih.gov/26772959/">26772959</a> )
<b>Preparation:</b>	Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.
<b>Note:</b>	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.
<b>Storage:</b>	Store at -80°C.
<b>Stability:</b>	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.



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RefSeq:	<a href="#">NP_005892</a>
Locus ID:	4087
UniProt ID:	<a href="#">Q15796</a> , <a href="#">Q53XR6</a>
RefSeq Size:	5415
Cytogenetics:	18q21.1
RefSeq ORF:	1401
Synonyms:	hMAD-2; hSMAD2; JV18; JV18-1; MADH2; MADR2
Summary:	<p>The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene products of the <i>Drosophila</i> gene 'mothers against decapentaplegic' (Mad) and the <i>C. elegans</i> 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]</p>
Protein Families:	Cancer stem cells, Druggable Genome, Embryonic stem cells, ES Cell Differentiation/IPS, Stem cell relevant signaling - JAK/STAT signaling pathway, Stem cell relevant signaling - TGFb/BMP signaling pathway, Transcription Factors
Protein Pathways:	Adherens junction, Cell cycle, Colorectal cancer, Pancreatic cancer, Pathways in cancer, TGF-beta signaling pathway, Wnt signaling pathway

## Product images:



Coomassie blue staining of purified SMAD2 protein (Cat# [TP304604]). The protein was produced from HEK293T cells transfected with SMAD2 cDNA clone (Cat# [RC204604]) using MegaTran 2.0 (Cat# [TT210002]).