

## Product datasheet for TP308749

### SMAD3 (NM\_005902) Human Recombinant Protein

#### Product data:

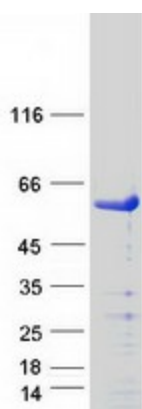
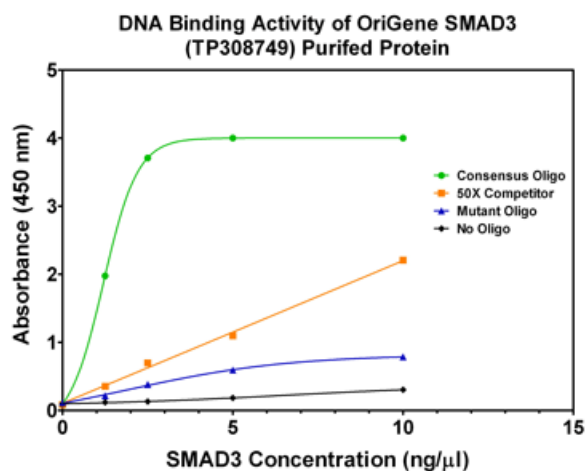
Product Type:	Recombinant Proteins
Description:	Recombinant protein of human SMAD family member 3 (SMAD3), transcript variant 1, 20 µg
Species:	Human
Expression Host:	HEK293T
Expression cDNA Clone or AA Sequence:	>RC208749 representing NM_005902 <b>Red</b> =Cloning site <b>Green</b> =Tags(s)
	MSSILPFTPIVKRLLGWKKGEQNGQEEKWCEKAVKSLVKKLKKKTGQLDELEKAITTQNVNTKCITIPRS LDGRLQVSHRKGLPHVIYCRLWRWPDLHSHHELAMELCEFAFNMKKDEVCVNPHYHYQRVETPVLPPVL V PRHTEIPAEFPPLDDYSHSIPENTNFPAGIEPQSNIPETPPPGLSEGETSDHQMNHSMDAGSPNLSPN PMSPAHNNLDLQPVTYCEPAFWCSISYYELNQRVGETFHASQPSMTVDGFTDPSNSERFCLGLLSNVNR N AAVELTRRHIGRGVRLYYIGGEVFAECLSDSAIFVQSPNCNQRYGWHPATVCKIPPGCNLKIFNNQEFAA LLAQSVNQGFQAVYQLTRMCTIRMSFVKGWGAEYRRQTVTSTPCWIELHLNGLQWLDKVLQMGSPSI R CSSVS
	<b>TRTRPLEQKLISEEDLAANDILDYKDDDDKV</b>
Tag:	C-Myc/DDK
Predicted MW:	47.9 kDa
Concentration:	>0.1 µg/µL as determined by microplate BCA method
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol



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<b>Bioactivity:</b>	SMAD3 Activity Verified in a DNA-binding Assay: <b>SMAD3 (TP308749)</b> activity was measured in a colorimetric DNA-binding assay. Purified SMAD3 protein containing a C-terminal MYC/DDK tag was incubated with biotinylated double-stranded oligonucleotide containing the SMAD3 consensus DNA-binding sequence. Following incubation, the reaction was transferred to a streptavidin-coated microplate to allow capture of the DNA-protein complex. After washing, the captured protein was detected with an anti-DDK peroxidase conjugate and colorimetric signal detection with TMB. Specificity of the protein-DNA interaction was confirmed by carrying out the binding in the presence of an unlabeled competitor oligonucleotide and by comparison to binding to an oligonucleotide containing a mutation in the consensus binding sequence.
<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.
<b>RefSeq:</b>	<a href="#">NP_005893</a>
<b>Locus ID:</b>	4088
<b>UniProt ID:</b>	<a href="#">P84022</a>
<b>RefSeq Size:</b>	6256
<b>Cytogenetics:</b>	15q22.33
<b>RefSeq ORF:</b>	1275
<b>Synonyms:</b>	HSPC193; HsT17436; JV15-2; LDS1C; LDS3; MADH3
<b>Summary:</b>	The SMAD family of proteins are a group of intracellular signal transducer proteins similar to the gene products of the Drosophila gene 'mothers against decapentaplegic' (Mad) and the C. elegans gene Sma. The SMAD3 protein functions in the transforming growth factor-beta signaling pathway, and transmits signals from the cell surface to the nucleus, regulating gene activity and cell proliferation. It also functions as a tumor suppressor. Mutations in this gene are associated with aneurysms-osteoarthritis syndrome and Loeys-Dietz Syndrome 3. [provided by RefSeq, Nov 2019]
<b>Protein Families:</b>	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
<b>Protein Pathways:</b>	Adherens junction, Cell cycle, Chronic myeloid leukemia, Colorectal cancer, Pancreatic cancer, Pathways in cancer, TGF-beta signaling pathway, Wnt signaling pathway

## Product images:



Coomassie blue staining of purified SMAD3 protein (Cat# TP308749). The protein was produced from HEK293T cells transfected with SMAD3 cDNA clone (Cat# [RC208749]) using MegaTran 2.0 (Cat# [TT210002]).