Smad3 ELISA Kit for Human, Mouse, Rat

PRODUCT OVERVIEW

Product Name	Smad3, ELISA Kit
Full Product Name	Phospho-Smad3 (Ser425) Colorimetric Cell-Based ELISA Kit
Product Gene Name	SMAD3 elisa kit
Product Synonym Names	JV15-2; MAD-3; MADH3; Mad3; Mothers against DPP homolog 3; Mothers against decapentaplegic homolog 3; SMAD 3; Smad 3
Species Reactivity	Human, Mouse, Rat
Assay Type	Phospho Cell-Based ELISA
Samples	Researchers plate their cell line of choice
Sensitivity	>=5000 cells/well
Form/Format	Two 96-Well Plates
Preparation and Storage	Store at 4 degree C.
Molecular Weight	48081
OMIM	U68019 mRNA
3D Structure	ModBase 3D Structure for P84022
Reactivity Note	Human: S425, Mouse: S425, Rat: S425
Detection Method	Colorimetric 450 nm
Product Categories/Family for SMAD3 elisa kit	Cell Based ELISA Kit
Related Product Information for SMAD3 elisa kit	MBS9500993 is a ready-to-use microwell, strip-or-full plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Smad3, ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing SMAD3. The ELISA analytical biochemical technique of the MBS9500993 kit is based on SMAD3 antibody-SMAD3 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect SMAD3 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, SMAD3. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).
Other Notes	Small volumes of SMAD3 elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for SMAD3. It may not necessarily be applicable to this product.

NCBI GI #	223029440
NCBI GeneID	4088
NCBI Accession #	NP_001138574.1
UniProt Primary Accession #	P84022
UniProt Secondary Accession #	O09064; O09144; O14510; O35273; Q92940; Q93002; A8K4B6; B7Z4Z5; B7Z6M9; B7Z9Q2; F5H383

UniProt Related Accession #	P84022
GenBank Nucleotide #	NM_001145102.1
NCBI Official Full Name	mothers against decapentaplegic homolog 3 isoform 2
NCBI Official Synonym Full Names	SMAD family member 3
NCBI Official Symbol	SMAD3
NCBI Official Synonym Symbols	LDS3; LDS1C; MADH3; JV15-2; HSPC193; HsT17436
UniProt Protein Name	Mothers against decapentaplegic homolog 3
UniProt Synonym Protein Names	JV15-2; SMAD family member 3; SMAD 3; Smad3; hSMAD3
Protein Family	Mothers against decapentaplegic
UniProt Gene Name	SMAD3
UniProt Synonym Gene Names	MADH3; MAD homolog 3; Mad3; Mothers against DPP homolog 3; hMAD-3; SMAD 3; Smad3; hSMAD3
NCBI Protein Information	mothers against decapentaplegic homolog 3
NCBI Summary for SMAD3	The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene products of the Drosophila gene 'mothers against decapentaplegic' (Mad) and the C. elegans gene Sma. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. This protein functions as a transcriptional modulator activated by transforming growth factor-beta and is thought to play a role in the regulation of carcinogenesis. [provided by RefSeq, Apr 2009]

UniProt Comments for SMAD3	SMAD3: transcription factor phosphorylated and activated by TGF-beta-type receptors. A receptor-regulated Smad (R-smad). Binds directly to consensus DNA-binding elements in the promoters of target genes. In mouse required for establishemnt of the mucosal immune response and proper development of skeleton. Protein type: DNA-binding; Nuclear receptor co-regulator; Transcription factor Chromosomal Location of Human Ortholog: 15q22.33 Cellular Component: cytoplasm; cytosol; nuclear chromatin; nuclear inner membrane; nucleoplasm; nucleus; plasma membrane; receptor complex; SMAD protein complex; SMAD2-SMAD3 protein complex; transcription factor complex Molecular Function: beta-catenin binding; bHLH transcription factor binding; chromatin DNA binding; co-SMAD binding; collagen binding; DEAD/H-box RNA helicase binding; DNA binding transcription factor activity; glucocorticoid receptor binding; identical protein binding; mineralocorticoid receptor binding; phosphatase binding; protein binding; protein heterodimerization activity; protein homodimerization activity; protein kinase binding; R-SMAD binding; sequence-specific DNA binding; transcription factor binding; transcription regulatory region DNA binding; transforming growth factor beta receptor binding; transforming growth factor beta receptor, pathway-specific cytoplasmic mediator activity; ubiquitin binding; ubiquitin protein ligase binding; zinc ion binding Biological Process: activation of cysteine-type endopeptidase activity involved in apoptotic process; activation of cysteine-type endopeptidase activity involved in apoptotic signaling pathway; activin receptor signaling pathway; cell cycle arrest; cell-cell junction organization; cellular response to transforming growth factor beta stimulus; developmental growth; embryonic cranial skeleton morphogenesis; embryonic foregut morphogenesis; embryonic pattern specification; endoderm development; evasion or tolerance of host defenses by virus; heart looping; immune response; immune system development; in utero embryonic development; lens fiber cell differentiation; liver development; mesoderm formation; negative regulation of apoptosis; negative regulation of cell growth; negative regulation of fat cell differentiation; negative regulation of inflammatory response; negative regulation of lung blood pressure; negative regulation of mitotic cell cycle; negative regulation of osteoblast differentiation; negative regulation of osteoblast proliferation; negative regulation of protein catabolic process; negative regulation of transcription from RNA polymerase II promoter; negative regulation of transforming growth factor beta receptor signaling pathway; nodal signaling pathway; osteoblast development; paraxial mesoderm morphogenesis; pericardium development; positive regulation of alkaline phosphatase activity; positive regulation of bone mineralization; positive regulation of cell migration; positive regulation of chondrocyte differentiation; positive regulation of epithelial to mesenchymal transition; positive regulation of extracellular matrix assembly; positive regulation of focal adhesion assembly; positive regulation of gene expression; positive regulation of interleukin-1 beta production; positive regulation of nitric oxide biosynthetic process; positive regulation of positive chemotaxis; positive regulation of stress fiber formation; positive regulation of transcription factor import into nucleus; positive regulation of transcription from RNA polymerase II promoter; positive regulation of transcription, DNA-templated; positive regulation of transforming growth factor beta3 production; primary microRNA processing; protein deubiquitination; protein stabilization; reduction of cytosolic calcium ion concentration; regulation of binding; regulation of epithelial cell proliferation; regulation of immune response; regulation of striated muscle tissue development; regulation of transcription from RNA polymerase II promoter; regulation of transforming growth factor beta receptor signaling pathway; regulation of transforming growth factor-beta2 production; response to hypoxia; SMAD protein complex assembly; somitogenesis; T cell activation; thyroid gland development; transcription, DNA-dependent; transforming growth factor beta receptor signaling pathway; ureteric bud development; Wnt receptor signaling pathway through beta-catenin; wound healing Disease: Loeys-dietz Syndrome 3
Research Articles on SMAD3	**1.** Because the expression of these genes correlates with cell shape, these are likely mechanosensitive genes that regulate SMAD3 and/or RELA activation in response to mechanical cues
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