

Smad2 protein

CatalogNo: YD0090

| Key Features

Reactivity

- Human

| Storage

Storage* -20°C/6 month, -80°C for long storage

Formulation Liquid in PBS

| Recommended Dilution Ratios

| Basic Information

Source E.coli

Purification E.coli

Purity SDS-PAGE >90%

| Immunogen Information

Sequence Amino acid: 19-254, with his-MBP tag.

| Target Information

Gene name SMAD2

Protein Name

Smad2 protein

Organism	Gene ID	UniProt ID
Human	4087 ;	Q15796 ;

Cellular Localization

Cytoplasm . Nucleus . Cytoplasmic and nuclear in the absence of TGF-beta. On TGF-beta stimulation, migrates to the nucleus when complexed with SMAD4 (PubMed:9865696, PubMed:21145499). On dephosphorylation by phosphatase PPM1A, released from the SMAD2/SMAD4 complex, and exported out of the nucleus by interaction with RANBP1 (PubMed:16751101, PubMed:19289081). Localized mainly to the nucleus in the early stages of embryo development with expression becoming evident in the cytoplasm at the blastocyst and epiblast stages (By similarity). .

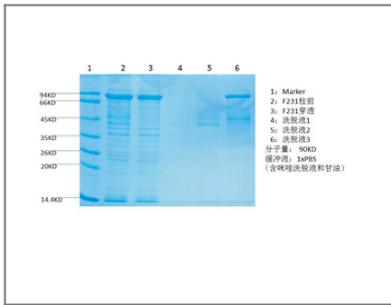
Tissue specificity

Expressed at high levels in skeletal muscle, endothelial cells, heart and placenta.

Function

embryonic axis specification, in utero embryonic development, formation of primary germ layer, mesoderm formation, peptide secretion, generation of a signal involved in cell-cell signaling, regionalization, transcription, regulation of transcription, DNA-dependent, regulation of transcription from RNA polymerase II promoter, RNA processing, protein complex assembly, protein amino acid phosphorylation, phosphorus metabolic process, phosphate metabolic process, cell surface receptor linked signal transduction, enzyme linked receptor protein signaling pathway, transmembrane receptor protein serine/threonine kinase signaling pathway, transforming growth factor beta receptor signaling pathway, SMAD protein complex assembly, intracellular signaling cascade, cell-cell signaling, zygotic determination of dorsal/ventral axis, gastrulation, pattern specification process, mesoderm development, heart development, negative regulation of cell proliferation, response to carbohydrate stimulus, response to hexose stimulus, response to glucose stimulus, post-embryonic development, embryonic development ending in birth or egg hatching, axis specification, embryonic pattern specification, negative regulation of biosynthetic process, positive regulation of biosynthetic process, hormone transport, dorsal/ventral axis specification, anterior/posterior pattern formation, dorsal/ventral pattern formation, response to organic substance, positive regulation of macromolecule biosynthetic process, negative regulation of macromolecule biosynthetic process, positive regulation of macromolecule metabolic process, negative regulation of macromolecule metabolic process, posttranscriptional regulation of gene expression, positive regulation of gene expression, negative regulation of gene expression, regulation of epithelial to mesenchymal transition, positive regulation of epithelial to mesenchymal transition, positive regulation of cell development, regulation of cell morphogenesis involved in differentiation, positive regulation of cell morphogenesis involved in differentiation, regulation of hormone levels, peptide transport, phosphorylation, posttranscriptional gene silencing, gene silencing, negative regulation of transcription, regulation of transforming growth factor beta receptor signaling pathway, regulation of cell morphogenesis, peptide hormone secretion, insulin secretion, respiratory tube development, lung development, pancreas development, gene silencing by RNA, dsRNA fragmentation, primary microRNA processing, negative regulation of cellular biosynthetic process, positive regulation of cellular biosynthetic process, regulation of gene-specific transcription, secretion by cell, response to lipid, response to monosaccharide stimulus, ncRNA processing, cellular macromolecular complex subunit organization, cellular macromolecular complex assembly, posttranscriptional gene silencing by RNA, gene silencing by miRNA, gene silencing by miRNA, production of miRNAs, organ growth, tube development, growth, regulation of gene expression, epigenetic, regulation of cell proliferation, chordate embryonic development, positive regulation of gene-specific transcription, response to dsRNA, cellular protein complex assembly, macromolecular complex subunit organization, cell fate commitment, regulation of transcription, positive regulation of cell differentiation, negative regulation of transcription, DNA-dependent, positive regulation of transcription, DNA-dependent, negative regulation of nucleobase, nucleoside, nucleotide and nucleic acid metabolic process, positive regulation of nucleobase, nucleoside, nucleotide and nucleic acid metabolic process, positive regulation of transcription, positive regulation of transcription from RNA polymerase II promoter, hormone secretion, secretion, mesoderm morphogenesis, paraxial mesoderm development, paraxial mesoderm morphogenesis, embryonic morphogenesis, tissue morphogenesis, positive regulation of developmental process, regulation of binding, positive regulation of cellular component organization, negative regulation of nitrogen compound metabolic process, positive regulation of nitrogen compound metabolic process, regulation of RNA metabolic process, negative regulation of RNA metabolic process, positive regulation of RNA metabolic process, palate development, regulation of cell development, respiratory system development, macromolecular complex assembly, protein complex biogenesis, response to cholesterol,

Validation Data



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Smad2 protein

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