



Recombinant Rat Mothers against decapentaplegic homolog 2 (Smad2)

Product Code	CSB-MP021787RA
Storage	Store at -20°C, for extended storage, conserve at -20°C or -80°C.
Uniprot No.	O70436
Product Type	Recombinant Protein
Immunogen Species	Rattus norvegicus (Rat)
Purity	>85% (SDS-PAGE)
Sequence	SSILPFTPP VVKRLLGWKK SAGGSGGAGG GEQNGQEEKW CEKAVKSLVK KLKKTGRLDE LEKAITTQNC NTKCVTIPST CSEIWGLSTA NTVDQWDTTG LYSFSEQTRS LDGRLQVSHR KGLPHVIYCR LWRWPDHSH HELKAIENCE YAFSLKKDEV CVNPYHYQRV ETPVLPVVLV PRHTEITEL PPLDDYTHSI PENTNFPAGI EPQSNYIPET PPPGYISEDG ETSDDQLNQS MDTGSPAELS PTTLSPVNHS LDLQPVTYSE PAFWCSIAYY ELNQRVGETF HASQPSLTVD GFTDPSNSER FCLGLLSNVN RNATVEMTRR HIGRGVRLYY IGGEVFAECL SDSAIFVQSP NCNQRYGWHP ATVCKIPPGC NLKIFNNQEF AALLAQSVNQ GFEAVYQLTR MCTIRMSFVK GWGAEYRRQT VTSTPCWIEL HLNGPLQWLD KVLTMGSPS VRCSSMS
Source	Mammalian cell
Target Names	Smad2
Protein Names	Recommended name: Mothers against decapentaplegic homolog 2 Short name= MAD homolog 2 Short name= Mothers against DPP homolog 2 Alternative name(s): Mad-related protein 2 SMAD family member 2 Short name= SMAD 2 Short n
Expression Region	2-467
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	Tag type will be determined during the manufacturing process.
Protein Length	Full Length of Mature Protein
Target Details	This protein 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 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 encoding the same protein have been observed.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself.

Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.