



# Recombinant Rat Mothers against decapentaplegic homolog 2 (Smad2)

<b>Product Code</b>	CSB-EP021787RA-B
<b>Storage</b>	Store at -20°C, for extended storage, conserve at -20°C or -80°C.
<b>Uniprot No.</b>	O70436
<b>Product Type</b>	Recombinant Protein
<b>Immunogen Species</b>	Rattus norvegicus (Rat)
<b>Purity</b>	>85% (SDS-PAGE)
<b>Sequence</b>	<p>SSILPFTPP VVKRLLGWKK SAGGSGGAGG GEQNGQEEKW CEKAVKSLVK            KLKKTGRLDE LEKAITTQNC NTKCVTIPST CSEIWGLSTA NTVDQWDTTG            LYSFSEQTRS LDGRLQVSHR KGLPHVIYCR LWRWPDLHSH HELKAIENCE            YAFSLKKDEV CVNPYHYQRV ETPVLPVVLV PRHTEILTEL 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</p>
<b>Source</b>	E.coli
<b>Target Names</b>	Smad2
<b>Protein Names</b>	<p>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</p>
<b>Expression Region</b>	2-467
<b>Notes</b>	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
<b>Tag Info</b>	Tag type will be determined during the manufacturing process.
<b>Protein Length</b>	Full Length of Mature Protein
<b>Target Details</b>	<p>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</p>



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.

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**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.

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**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.