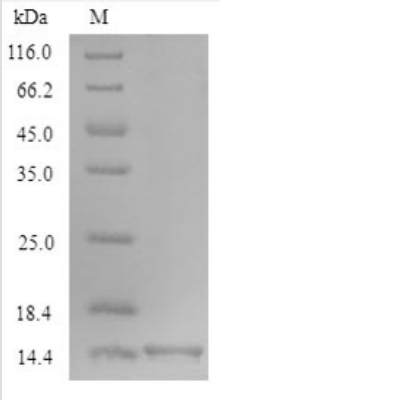
Recombinant Mouse Oncomodulin (Ocm)

Product Code	CSB-YP016264MO
Relevance	Has some calmodulin-like activity with respect to enzyme activation and growth regulation. Binds two calcium ions.
Abbreviation	Recombinant Mouse Ocm protein
Storage	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.
Uniprot No.	P51879
Alias	Parvalbumin beta
Product Type	Recombinant Protein
Immunogen Species	Mus musculus (Mouse)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	SITDILSADDIAAALQECQDPDTFEPQKFFQTSGLSKMSASQLKDIFQFIDNDQSGYLDEDELKYFLQRFQSDARELTESETKSLMDAADNDGDGKIGADEFQEMVHS
Research Area	Neuroscience
Source	Yeast
Target Names	Ocm
Protein Names	Recommended name: Oncomodulin Short name= OM Alternative name(s): Parvalbumin beta
Expression Region	2-109aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	14.1kDa
Protein Length	Full Length of Mature Protein
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

In the production of recombinant Mouse Ocm protein, the gene for Ocm (Yeast) was cloned into a vector and expressed as Ocm protein in Yeast. The plasmids with the copy of Ocm, or the expression vector, were often used to enhance gene expression. Every step of production was undergone with a strict QC system. N-terminal 6xHis tag was used in the process. The purity is 90% determined by SDS-PAGE.

Oncomodulin (OCM) is a small EF-hand Ca2+-binding protein (CaBP) of approximately 12 kDa belonging to the parvalbumin family. Initially, OCM was considered oncogenic due to lack of evidence of any expression in normal post-embryonic tissue. However, decades after its initial discovery, OCM was identified as a major protein in sensory cells of the guinea pig cochlea. There are only a limited number of studies on the function of OCM largely due to its very restricted temporal and spatial expression patterns. Also, only a few OCM studies have addressed: intracellular concentration, affinity for metal ions, mobility, and Ca2+-sensing capacity. Existing findings show that OCM is evolutionarily distinguished from the majority of lower vertebrate β-parvalbumins. OCM may have an ambiguous function that depends upon the cell type in which it is expressed, and this ambiguity further distinguishes it from other EF-hand CaBPs. In sensory cells, recent studies suggest that OCM plays an essential role in maintaining auditory function, most likely affecting OHC motility mechanisms. In immune cells, OCM may be secreted in response to inflammatory signals and facilitates axon regeneration.

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.