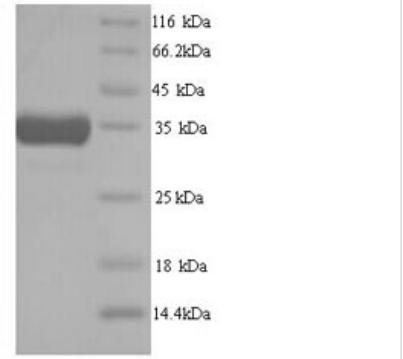
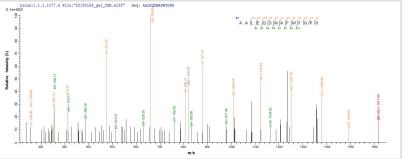
Recombinant Mouse Heme oxygenase 1 (Hmox1)

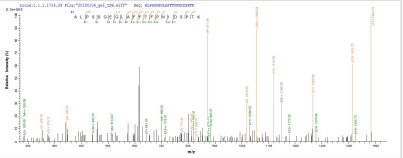
Product Code	CSB-YP010583MO
Relevance	He oxygenase cleaves the he ring at the alpha methene bridge to form biliverdin. Biliverdin is subsequently converted to bilirubin by biliverdin reductase. Under physiological conditions, the activity of he oxygenase is highest in the spleen, where senescent erythrocytes are sequestrated and destroyed. Exhibits cytoprotective effects since excess of free he sensitizes cells to undergo apoptosis.
Abbreviation	Recombinant Mouse Hmox1 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.	P14901
Alias	P32 protein
Product Type	Recombinant Protein
Immunogen Species	Mus musculus (Mouse)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	MERPQPDSMPQDLSEALKEATKEVHIQAENAEFMKNFQKGQVSREGFKLVMASLYHIYTALEEEIERNKQNPVYAPLYFPEELHRRAALEQDMAFWYGPHWQEIIPCTPATQHYVKRLHEVGRTHPELLVAHAYTRYLGDLSGGQVLKKIAQKAMALPSSGEGLAFFTFPNIDSPTKFKQLYRARMNTLEMTPEVKHRVTEEAKTAFLLNIELFEELQVMLTEEHKDQSPSQMASLRQRPASLVQDTAPAETPRGKPQISTSSSQTPLLQWVLTLSFLLATVAVGIYAM
Research Area	Others
Source	Yeast
Target Names	Hmox1
Protein Names	Recommended name: Heme oxygenase 1 Short name= HO-1 EC= 1.14.99.3 Alternative name(s): P32 protein
Expression Region	1-289aa
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	34.9kDa
Protein Length	Full Length
Image	



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



Based on the SEQUEST from database of Yeast host and target protein, the LC-MS/MS Analysis result of CSB-YP010583MO could indicate that this peptide derived from Yeast-expressed Mus musculus (Mouse) Hmox1.



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Description

The expression vector recombined with the recombinant DNA was transfected into the yeast cells for expression. The recombinant DNA resulted from the fusion of the gene coding for the 1-289aa of the mouse Hmox1 protein and the N-terminal 6xHis tag gene. The product was purified and isolated to get the recombinant mouse Hmox1 protein with N-terminal 6xHis tag. The purity of this recombinant Hmox1 protein reaches up to 90%. Under SDS-PAGE condition, this recombinant Hmox1 protein showed a band with a molecular weight of about 32 kDa on the gel.

Hmox1 is a gene encoded a protein named Hmox1 in mouse. This protein belongs Heme oxygenase family. Mice lacking Hmox1 exhibited a significant increase in concentrations of liver and brain gangliosides and in mRNA expression of the key enzymes of ganglioside metabolism. This gene in human is named HMOX1 (heme oxygenase 1 gene) encoding an enzyme called heme oxygenase 1 (abbreviated HMOX1 or HO-1). The protein mediates the first step of heme catabolism, it cleaves heme to form biliverdin. Recently, a study reported that high dose expression of heme oxigenase-1 induces retinal degeneration through ER stress-related DDIT3. This study revealed that HMOX1 plays a dual role in retinal degeneration, and clarified the pathogenic mechanism of high-dose HMOX1 inducing photoreceptor cell degeneration through the endoplasmic reticulum stress effector DDIT3.

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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