



## Product Datasheet

<b>Product Name</b>	Myoglobin (Heme free) Human Recombinant
<b>Cata No</b>	CB500995
<b>Source</b>	<i>Escherichia Coli.</i>
<b>Synonyms</b>	Myoglobin, MB, PVALB, MGC13548.

### Description

Myoglobin is a member of the globin superfamily and can be found in skeletal and cardiac muscles. It is a haemoprotein that contributes to intracellular oxygen storage and transcellular facilitated diffusion of oxygen. Myoglobin has a single-chain globular structure of 153 amino acids, containing a heme prosthetic group (iron-containing porphyrin) in the core around which the remaining apoprotein folds. Myoglobin has 8 alpha helices and a hydrophobic core. Myoglobin's molecular weight is 16.7 kDa, and it is the primary oxygen-carrying pigment of muscle tissues. The binding of oxygen in myoglobin is different from the cooperative oxygen binding in hemoglobin, since positive collaboration is a property of multimeric/oligomeric proteins only. Instead, the binding of oxygen by myoglobin is uninfluenced by the oxygen pressure in the surrounding tissue. Myoglobin is frequently referred to as having an "instant binding tenacity" to oxygen given its hyperbolic oxygen dissociation curve. Different organisms are able to hold their breaths longer due to high concentrations of myoglobin in their muscle cells. Myoglobin is responsible for the pigments that make meat red. The color of the meat is partly determined by the charge of the iron atom in myoglobin and the oxygen attached to it. Myoglobin is found in Type I muscle, Type II A and Type II B, but it is mostly deemed that myoglobin is not found in smooth muscle. Myoglobin is

discharged from damaged muscle tissue (rhabdomyolysis), which contains very high concentrations of myoglobin. Even though the released myoglobin is filtered by the kidneys, it is toxic to the renal tubular epithelium and thus may cause acute renal failure.

Myoglobin heme free Human Recombinant produced in E.Coli is a non-glycosylated polypeptide chain having a molecular mass of 11.67 kDa. The Myoglobin heme free contains N-terminal T7 tag and purified by proprietary chromatographic techniques.

### Physical Appearance

Sterile Filtered solution.

### Purity

Greater than 95.0% as determined by:  
(a) Analysis by RP-HPLC.  
(b) Analysis by SDS-PAGE.

### Formulation

The sterile solution contains phosphate-buffered saline (pH 8.0) and 50mM phosphate-borate

### Stability

Myoglobin heme free although stable at 15°C for 2 weeks, should be stored at 4°C.  
For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

**Please do not freeze.**

**\* For Non-Clinical Research Use Only \***