

**CYGB Antibody (N-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP16031a****Specification**

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**CYGB Antibody (N-term) Blocking Peptide - Product Information**Primary Accession [Q8WWM9](#)**CYGB Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 114757**Other Names**

Cytoglobin, Histoglobin, HGb, Stellate cell activation-associated protein, CYGB, STAP

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**CYGB Antibody (N-term) Blocking Peptide - Protein Information****Name** CYGB ([HGNC:16505](#))**Function**

Probable multifunctional globin with a hexacoordinated heme iron required for the catalysis of various reactions depending on redox condition of the cell as well as oxygen availability (PubMed:<a href="http://www.uniprot.org/citations/12359339" target="\_blank">12359339</a>, PubMed:<a href="http://www.uniprot.org/citations/11893755" target="\_blank">11893755</a>, PubMed:<a href="http://www.uniprot.org/citations/19147491" target="\_blank">19147491</a>, PubMed:<a href="http://www.uniprot.org/citations/20511233" target="\_blank">20511233</a>, PubMed:<a href="http://www.uniprot.org/citations/28671819" target="\_blank">28671819</a>, PubMed:<a href="http://www.uniprot.org/citations/28393874" target="\_blank">28393874</a>, PubMed:<a href="http://www.uniprot.org/citations/29128400" target="\_blank">29128400</a>, PubMed:<a href="http://www.uniprot.org/citations/33576020" target="\_blank">33576020</a>, PubMed:<a href="http://www.uniprot.org/citations/34930834" target="\_blank">34930834</a>, PubMed:<a href="http://www.uniprot.org/citations/15165856" target="\_blank">15165856</a>). Has a nitric oxide dioxygenase (NOD) activity and is most probably involved in cell-mediated and oxygen-dependent nitric oxide consumption (PubMed:<a href="http://www.uniprot.org/citations/19147491" target="\_blank">19147491</a>, PubMed:<a href="http://www.uniprot.org/citations/20511233" target="\_blank">20511233</a>, PubMed:<a href="http://www.uniprot.org/citations/28671819" target="\_blank">28671819</a>, PubMed:<a href="http://www.uniprot.org/citations/28393874" target="\_blank">28393874</a>). By

scavenging this second messenger may regulate several biological processes including endothelium-mediated vasodilation and vascular tone (PubMed:<a href="http://www.uniprot.org/citations/19147491" target="\_blank">19147491</a>, PubMed:<a href="http://www.uniprot.org/citations/28393874" target="\_blank">28393874</a>). Under normoxic conditions functions as a nitric oxide dioxygenase (NOD) but under hypoxic conditions the globin may switch its function to that of a nitrite (NO<sub>2</sub>) reductase (NiR), generating nitric oxide (PubMed:<a href="http://www.uniprot.org/citations/29128400" target="\_blank">29128400</a>). Could also have peroxidase and superoxide dismutase activities, detoxifying reactive oxygen species and protecting cells against oxidative stress (PubMed:<a href="http://www.uniprot.org/citations/12359339" target="\_blank">12359339</a>, PubMed:<a href="http://www.uniprot.org/citations/33576020" target="\_blank">33576020</a>, PubMed:<a href="http://www.uniprot.org/citations/34930834" target="\_blank">34930834</a>). Also binds dioxygen with low affinity and could function as an oxygen sensor but has probably no function as a respiratory oxygen carrier (PubMed:<a href="http://www.uniprot.org/citations/11893755" target="\_blank">11893755</a>, PubMed:<a href="http://www.uniprot.org/citations/15299006" target="\_blank">15299006</a>, PubMed:<a href="http://www.uniprot.org/citations/20553503" target="\_blank">20553503</a>).

**Cellular Location**

Cytoplasm. Nucleus

**Tissue Location**

Widely expressed. Highest expression in heart, stomach, bladder and small intestine.

**CYGB Antibody (N-term) Blocking Peptide - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

**CYGB Antibody (N-term) Blocking Peptide - Images****CYGB Antibody (N-term) Blocking Peptide - Background**

Cytoglobin is a ubiquitously expressed hexacoordinate hemoglobin that may facilitate diffusion of oxygen through tissues, scavenge nitric oxide or other reactive oxygen species, or serve a protective function during oxidative stress (Trent and Hargrove, 2002 [PubMed 11893755]).

**CYGB Antibody (N-term) Blocking Peptide - References**

Gardner, A.M., et al. J. Biol. Chem. 285(31):23850-23857(2010) Lechauve, C., et al. FEBS J. 277(12):2696-2704(2010) Shaw, R.J., et al. Br. J. Cancer 101(1):139-144(2009) Halligan, K.E., et al. J. Biol. Chem. 284(13):8539-8547(2009) Ostojic, J., et al. Arch. Ophthalmol. 126(11):1530-1536(2008)