

Anti-Cytoglobin Antibody
Catalog # ABO10972**Specification**

Anti-Cytoglobin Antibody - Product Information

Application	WB
Primary Accession	Q8WWM9
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Cytoglobin(CYGB) detection. Tested with WB in Human;Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-Cytoglobin Antibody - Additional Information

Gene ID 114757

Other Names

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

Calculated MW

21405 MW KDa

Application Details

Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse

Subcellular Localization

Cytoplasm .

Tissue Specificity

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

Protein Name

Cytoglobin

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Thimerosal, 0.05mg NaN₃.

Immunogen

A synthetic peptide corresponding to a sequence at the N-terminus of human Cytoglobin(50-68aa FVNFP_{SAKQYFSQFKH}MED), identical to the related rat sequence, different from the related mouse sequence by one amino acid.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After r°Constitution, at 4°C for one month. It°Can also be aliquotted and stored frozen at -20°C for a longer time.Avoid repeated freezing and thawing.

Anti-Cytoglobin Antibody - 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:12359339, PubMed:11893755, PubMed:19147491, PubMed:20511233, PubMed:28671819, PubMed:28393874, PubMed:29128400, PubMed:33576020, PubMed:34930834, PubMed:15165856). Has a nitric oxide dioxygenase (NOD) activity and is most probably involved in cell-mediated and oxygen-dependent nitric oxide consumption (PubMed:19147491, PubMed:20511233, PubMed:28671819, PubMed:28393874). By scavenging this second messenger may regulate several biological processes including endothelium-mediated vasodilation and vascular tone (PubMed:19147491, PubMed:28393874). 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 (NO₂) reductase (NiR), generating nitric oxide (PubMed:29128400). Could also have peroxidase and superoxide dismutase activities, detoxifying reactive oxygen species and protecting cells against oxidative stress (PubMed:12359339, PubMed:33576020, PubMed:34930834). Also binds dioxygen with low affinity and could function as an oxygen sensor but has probably no function as a respiratory oxygen carrier (PubMed:11893755, PubMed:15299006, PubMed:20553503).

Cellular Location

Cytoplasm. Nucleus

Tissue Location

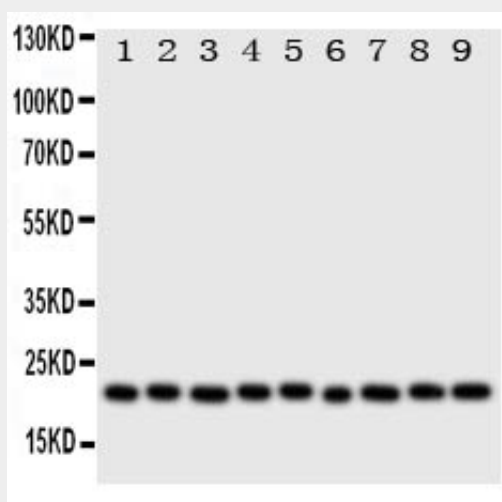
Widely expressed. Highest expression in heart, stomach, bladder and small intestine.

Anti-Cytoglobin Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-Cytoglobin Antibody - Images



Anti-Cytoglobin antibody, ABO10972, Western blotting All lanes: Anti Cytoglobin (ABO10972) at 0.5ug/ml
Lane 1: Rat Brain Tissue Lysate at 50ug
Lane 2: Rat Small Intestine Tissue Lysate at 50ug
Lane 3: Rat Liver Tissue Lysate at 50ug
Lane 4: Rat Kidney Tissue Lysate at 50ug
Lane 5: SGC Whole Cell Lysate at 40ug
Lane 6: COLO320 Whole Cell Lysate at 40ug
Lane 7: SMMC Whole Cell Lysate at 40ug
Lane 8: PANC Whole Cell Lysate at 40ug
Lane 9: HELA Whole Cell Lysate at 40ug
Predicted bind size: 21KD
Observed bind size: 21KD

Anti-Cytoglobin Antibody - Background

Cytoglobin (CYGB), also called HGB or STAP, 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. The cytoglobin gene is mapped on 17q25.1. The CYGB gene contains 4 exons and spans about 9 kb. Cytoglobin has many elements common to vertebrate globins, including invariant histidine residues, and the amino acids that form the heme pocket share similarity with pentacoordinate myoglobin. In contrast to the high oxygen affinities displayed by most hexacoordinate hemoglobins, the characteristics of CYGB indicate that it can facilitate oxygen transport. Because the oxygen affinity of CYGB is more similar to myoglobin than to neuroglobin, and the oxy form of CYGB resists autooxidation, CYGB is proposed to represent a tissue oxygen reservoir by Sawai et al.