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Anti-Cytoglobin Antibody

Catalog # ABO10972

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.

Additional Information

Gene ID	114757
Other Names	Cytoglobin, Histoglobin, HGb, Stellate cell activation-associated protein, CYGB, STAP
Calculated MW	21405
Application Details	Western blot, 0.1-0.5 □g/ml, Human, Rat, Mouse
Subcellular Localization	Cytoplasm .
Tissue Specificity	Ubiquitously expressed. Highest expression in heart, stomach, bladder and small intestine. .
Source	Eukaryota
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 FVNFPSAKQYFSQFKHMED), 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.

Protein Information

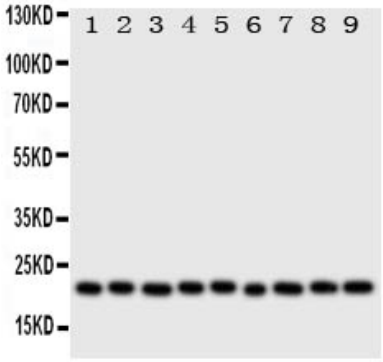
Name	CYGB (HGNC:16505)
Function	Probable multifunctional globin with a hexacoordinated heme iron required for the catalysis of various reactions depending on redox condition of the cell as well as oxygen availability (PubMed:11893755, PubMed:12359339, PubMed:15165856, PubMed:19147491, PubMed:20511233, PubMed:28393874, PubMed:28671819, PubMed:29128400, PubMed:33576020, PubMed:34930834). 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:28393874, PubMed:28671819). 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.

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.

Images

Anti-Cytoglobin antibody, ABO10972, Western blottingAll lanes: Anti Cytoglobin (ABO10972) at 0.5ug/mlLane 1: Rat Brain Tissue Lysate at 50ugLane 2: Rat Small Intestine Tissue Lysate at 50ugLane 3: Rat Liver Tissue Lysate at 50ugLane 4: Rat Kidney Tissue Lysate at 50ugLane 5: SGC Whole Cell Lysate at 40ugLane 6: COLO320 Whole Cell Lysate at 40ugLane 7: SMMC Whole Cell Lysate at 40ugLane 8: PANC Whole Cell Lysate at 40ugLane 9: HELA Whole Cell Lysate at 40ugPredicted bind size:



21KDObserved bind size: 21KD

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.