Hemoglobin Beta (HBB) Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	Hemoglobin Beta (HBB), Polyclonal Antibody
Full Product Name	Hemoglobin Beta Polyclonal Antibody Bio Conjugated
Product Gene Name	anti-HBB antibody
Product Synonym Names	Hemoglobin Beta
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human
Form/Format	0.01M TBS (pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Purity/Purification	affinity purified by Protein A
Preparation and Storage	Store at -20 degree C for one year. Avoid repeated freeze/thaw cycles. Shipped at 4 degree C.
Molecular Weight	16kDa
OMIM	phenotype 613985
3D Structure	ModBase 3D Structure for P68871
Conjugation	Biotin
Immunogen Type	51-147/147
Product Categories/Family for anti-HBB antibody	Conjugated Primary Antibodies
Applications Tested/Suitable for anti-HBB antibody	Western Blot (WB), Immunohistochemistry (IHC), Immunofluorescence (IF)
Application Notes for anti-HBB antibody	WB: 1:50-200 IHC-P: 1:50-200 IHC-F: 1:50-200 IF: 1:50-200
Related Product Information for anti-HBB antibody	MBS9464028 is an antibody targeting HBB. Also known as Hemoglobin Beta Polyclonal Antibody Bio Conjugated. Reactive in Human. Host: Rabbit.
Other Notes	Small volumes of anti-HBB antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for HBB. It may not necessarily be applicable to this product.

NCBI GI #	56749856
NCBI GeneID	3043
NCBI Accession #	P68871.2
UniProt Primary Accession #	P68871

UniProt Secondary Accession #	P02023; Q13852; Q14481; Q14510; Q45KT0; Q549N7; Q6FI08; Q6R7N2; Q8IZI1; A4GX73; B2ZUE0
UniProt Related Accession #	P68871
NCBI Official Full Name	Hemoglobin subunit beta
NCBI Official Synonym Full Names	hemoglobin, beta
NCBI Official Symbol	HBB
NCBI Official Synonym Symbols	CD113t-C; beta-globin
UniProt Protein Name	Hemoglobin subunit beta
UniProt Synonym Protein Names	Beta-globin; Hemoglobin beta chainCleaved into the following 2 chains:LVV-hemorphin-7; Spinorphin
Protein Family	DNA-binding protein
UniProt Gene Name	HBB
UniProt Entry Name	HBB_HUMAN
NCBI Protein Information	hemoglobin subunit beta; beta globin chain; hemoglobin beta chain
NCBI Summary for HBB	The alpha (HBA) and beta (HBB) loci determine the structure of the 2 types of polypeptide chains in adult hemoglobin, Hb A. The normal adult hemoglobin tetramer consists of two alpha chains and two beta chains. Mutant beta globin causes sickle cell anemia. Absence of beta chain causes beta-zero-thalassemia. Reduced amounts of detectable beta globin causes beta-plus-thalassemia. The order of the genes in the beta-globin cluster is 5'-epsilon -- gamma-G -- gamma-A -- delta -- beta--3'. [provided by RefSeq, Jul 2008]

UniProt Comments for HBB	HBB: Involved in oxygen transport from the lung to the various peripheral tissues. Defects in HBB may be a cause of Heinz body anemias (HEIBAN). This is a form of non-spherocytic hemolytic anemia of Dacie type 1. After splenectomy, which has little benefit, basophilic inclusions called Heinz bodies are demonstrable in the erythrocytes. Before splenectomy, diffuse or punctate basophilia may be evident. Most of these cases are probably instances of hemoglobinopathy. The hemoglobin demonstrates heat lability. Heinz bodies are observed also with the Ivemark syndrome (asplenia with cardiovascular anomalies) and with glutathione peroxidase deficiency. Defects in HBB are the cause of beta-thalassemia (B-THAL). A form of thalassemia. Thalassemias are common monogenic diseases occurring mostly in Mediterranean and Southeast Asian populations. The hallmark of beta-thalassemia is an imbalance in globin-chain production in the adult HbA molecule. Absence of beta chain causes beta(0)-thalassemia, while reduced amounts of detectable beta globin causes beta(+)-thalassemia. In the severe forms of beta-thalassemia, the excess alpha globin chains accumulate in the developing erythroid precursors in the marrow. Their deposition leads to a vast increase in erythroid apoptosis that in turn causes ineffective erythropoiesis and severe microcytic hypochromic anemia. Clinically, beta-thalassemia is divided into thalassemia major which is transfusion dependent, thalassemia intermedia (of intermediate severity), and thalassemia minor that is asymptomatic. Defects in HBB are the cause of sickle cell anemia (SKCA); also known as sickle cell disease. Sickle cell anemia is characterized by abnormally shaped red cells resulting in chronic anemia and periodic episodes of pain, serious infections and damage to vital organs. Normal red blood cells are round and flexible and flow easily through blood vessels, but in sickle cell anemia, the abnormal hemoglobin (called Hb S) causes red blood cells to become stiff. They are C-shaped and resembles a sickle. These stiffer red blood cells can led to microvascular occlusion thus cutting off the blood supply to nearby tissues. Defects in HBB are the cause of beta-thalassemia dominant inclusion body type (B-THALIB). An autosomal dominant form of beta thalassemia characterized by moderate anemia, lifelong jaundice, cholelithiasis and splenomegaly, marked morphologic changes in the red cells, erythroid hyperplasia of the bone marrow with increased numbers of multinucleate red cell precursors, and the presence of large inclusion bodies in the normoblasts, both in the marrow and in the peripheral blood after splenectomy. Belongs to the globin family. Protein type: Carrier Chromosomal Location of Human Ortholog: 11p15.5 Cellular Component: hemoglobin complex; extracellular region; cytosol Molecular Function: haptoglobin binding; protein binding; peroxidase activity; hemoglobin binding; iron ion binding; heme binding; oxygen binding; oxygen transporter activity Biological Process: receptor-mediated endocytosis; positive regulation of nitric oxide biosynthetic process; nitric oxide transport; response to hydrogen peroxide; oxygen transport; protein heterooligomerization; bicarbonate transport; hydrogen peroxide catabolic process; regulation of blood pressure; blood coagulation; regulation of blood vessel size Disease: Fetal Hemoglobin Quantitative Trait Locus 1; Beta-thalassemia; Sickle Cell Anemia; Heinz Body Anemias; Beta-thalassemia, Dominant Inclusion Body Type; Malaria, Susceptibility To; Alpha-thalassemia
Research Articles on HBB	**1.** DNA sequencing of the HBB gene revealed heterozygosity for a mutation at codon 98 [GTG --> ATG, Val --> Met], which gives rise to Hb-Koln. This is the first case of Hb Koln in an Indian patient referred for diagnosis of non-spherocytic hemolytic anemia.
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