Hemoglobin Beta (HBb) Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	Hemoglobin Beta (HBb), Polyclonal Antibody
Full Product Name	PE-Linked Polyclonal Antibody to Hemoglobin Beta (HBb)
Product Gene Name	anti-HBb antibody
Product Synonym Names	HB-B; HBD; CD113t-C; Beta Globin; Spinorphin
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human, Bovine
Concentration	>=100ug/ml (lot specific)
Matching Pairs	Unconjugated Antibody: HBb (MBS2026228) PE Conjugated Antibody: HBb (MBS2069968)
Matching Pairs	PE Conjugated Antibody: HBb (MBS2069968) Immunogen: HBb (MBS2029839)
Molecular Weight	15,998 Da
OMIM	M25079 mRNA
Supply Chain Verification	Manufactured in a lab with traceable raw materials. Bulk orders can typically be prepared to the customer's specifications, please inquire.
Immunogen	HBb (Met1~His145)
Conjugation	PE
Cross Reactivity	Bovine
Unconjugated Antibody	The unconjugated antibody version of this item is also available as catalog #MBS2026228
ISO Certification	Manufactured in an ISO 9001:2015 and ISO 13485:2016 Certified Laboratory.
Applications Tested/Suitable for anti-HBb antibody	Western Blot (WB), Immunocytochemistry (ICC), Immunohistochemistry (IHC) Formalin/Paraffin, ELISA (ELISA)
Related Product Information for anti-HBb antibody	MBS2069968 is an antibody targeting HBb. Also known as PE-Linked Polyclonal Antibody to Hemoglobin Beta (HBb). Reactive in Human, Bovine. 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 #	410178713
NCBI GeneID	3043
NCBI Accession #	AFV63187.1
UniProt Secondary Accession #	P02023; Q13852; Q14481; Q14510; Q45KT0; Q549N7; Q6FI08; Q6R7N2; Q8IZI1; A4GX73; B2ZUE0

UniProt Related Accession #	P68871
NCBI Official Full Name	hemoglobin beta, partial
NCBI Official Synonym Full Names	hemoglobin subunit 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 chain
Protein Family	DNA-binding protein
UniProt Gene Name	HBB
NCBI Protein Information	hemoglobin subunit beta
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: 11p15.4 Cellular Component: cytosol; extracellular region; hemoglobin complex Molecular Function: haptoglobin binding; hemoglobin binding; oxygen binding; peroxidase activity; protein binding Biological Process: bicarbonate transport; blood coagulation; hydrogen peroxide catabolic process; oxygen transport; protein heterooligomerization; receptor-mediated endocytosis; response to hydrogen peroxide Disease: Alpha-thalassemia; Beta-thalassemia; Beta-thalassemia, Dominant Inclusion Body Type; Fetal Hemoglobin Quantitative Trait Locus 1; Heinz Body Anemias; Malaria, Susceptibility To; Sickle Cell Anemia

Research Articles on HBb	**1.** Data suggest that coagulation factor IX (hFIX) minigene containing beta-globin (hBG) introns could represent a particular interest in stem cell-based gene therapy of hemophilias.
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