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HBB Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP11557b

Product Information

Application	WB, FC, IHC-P, E
Primary Accession	P68871
Other Accession	P04246, P02101, P02128, P06643, P06642, P02042, P02057, P02112, P02081, P11517, P02089, P02091, P02088, NP_000509.1
Reactivity	Human, Rat, Mouse
Predicted	Mouse, Rat, Rabbit, Pig, Chicken, Bovine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB18724
Calculated MW	15998
Antigen Region	80-107

Additional Information

Gene ID	3043
Other Names	Hemoglobin subunit beta, Beta-globin, Hemoglobin beta chain, LVV-hemorphin-7, Spinorphin, HBB
Target/Specificity	This HBB antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 80-107 amino acids from the C-terminal region of human HBB.
Dilution	WB~~1:1000 FC~~1:10~50 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	HBB Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	HBB

Function	Involved in oxygen transport from the lung to the various peripheral tissues. [Spinorphin]: Functions as an endogenous inhibitor of enkephalin-degrading enzymes such as DPP3, and as a selective antagonist of the P2RX3 receptor which is involved in pain signaling, these properties implicate it as a regulator of pain and inflammation.
Tissue Location	Red blood cells..

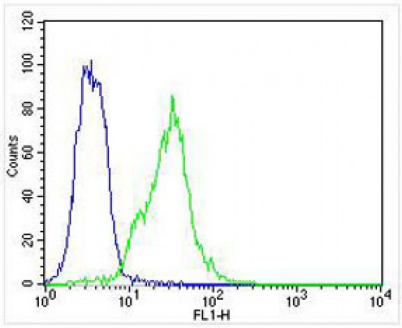
Background

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'.

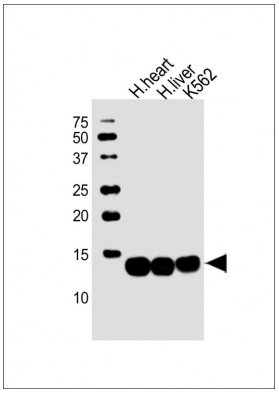
References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Zhou, D., et al. Nat. Genet. 42(9):742-744(2010)
Onakoya, P.A., et al. Ear Nose Throat J 89(7):306-310(2010)
Belisario, A.R., et al. Acta Haematol. 124(3):162-170(2010)
Prakobkaew, N., et al. Acta Haematol. 124(2):115-119(2010)

Images



Overlay histogram showing K562 cells stained with AP11557b (green line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP12735b, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit lgG (H+L) (1583138) at 1/400 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



All lanes : Anti-HBB Antibody (C-term) at 1:2000 dilution Lane 1: human heart lysate Lane 2: human liver lysate Lane 3: K562 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 16 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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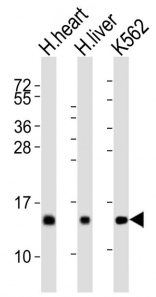

Peroxidase conjugated at 1/10000 dilution Predicted band size : 16 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- Metformin induces FOXO3-dependent fetal hemoglobin production in human primary erythroid cells.
- The Combination of CRISPR/Cas9 and iPSC Technologies in the Gene Therapy of Human β-thalassemia in Mice.
- Improved hematopoietic differentiation efficiency of gene-corrected beta-thalassemia induced pluripotent stem cells by CRISPR/Cas9 system.