abcam

Product datasheet

Anti-Hemoglobin subunit beta antibody [EPR20614] ab214049

Recombinant RabMAb

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Overview

Product name	Anti-Hemoglobin subunit beta antibody [EPR20614]
Description	Rabbit monoclonal [EPR20614] to Hemoglobin subunit beta
Host species	Rabbit
Tested applications	**Suitable for:** WB, IP
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Recombinant full length protein. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: TF-1 cell lysate; Human lung and fetal heart lysates; Rat heart lysate; Mouse heart and lung lysates. IP: TF-1 cell lysate.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 0.05% BSA, 40% Glycerol (glycerin, glycerine), PBS
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR20614

Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab214049 in the following tested applications.

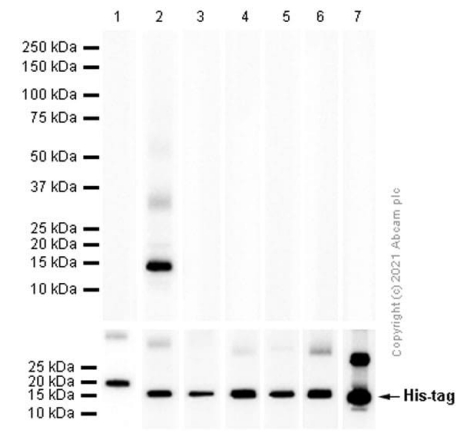
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000. Detects a band of approximately 13 kDa (predicted molecular weight: 15 kDa).
IP		1/40.

Target

Function	Involved in oxygen transport from the lung to the various peripheral tissues. LVV-hemorphin-7 potentiates the activity of bradykinin, causing a decrease in blood pressure. 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 specificity	Red blood cells.
Involvement in disease	Heinz body anemias Beta-thalassemia Sickle cell anemia Beta-thalassemia, dominant, inclusion body type
Sequence similarities	Belongs to the globin family.
Post-translational modifications	Glucose reacts non-enzymatically with the N-terminus of the beta chain to form a stable ketoamine linkage. This takes place slowly and continuously throughout the 120-day life span of the red blood cell. The rate of glycation is increased in patients with diabetes mellitus. S-nitrosylated; a nitric oxide group is first bound to Fe(2+) and then transferred to Cys-94 to allow capture of O(2). Acetylated on Lys-60, Lys-83 and Lys-145 upon aspirin exposure.

Images



Western blot - Anti-Hemoglobin subunit beta antibody [EPR20614] (ab214049)

All lanes : Anti-Hemoglobin subunit beta antibody [EPR20614] (ab214049) at 1/1000 dilution

Lane 1 : Recombinant Human Hemoglobin subunit alpha protein (denatured) (**ab131697**)
Lane 2 : His-tagged human Hemoglobin subunit beta/ba1 (aa3-147) recombinant protein
Lane 3 : His-tagged human Hemoglobin subunit delta (aa3-147) recombinant protein
Lane 4 : His-tagged human Hemoglobin subunit epsilon (aa3-147) recombinant protein
Lane 5 : His-tagged human Hemoglobin subunit Gamma-2 (aa2-147) recombinant protein
Lane 6 : His-tagged human Hemoglobin subunit Gamma-1 (aa2-147) recombinant protein
Lane 7 : Recombinant Human Hemoglobin subunit zeta protein (**ab95347**)

Lysates/proteins at 0.01 µg per lane.

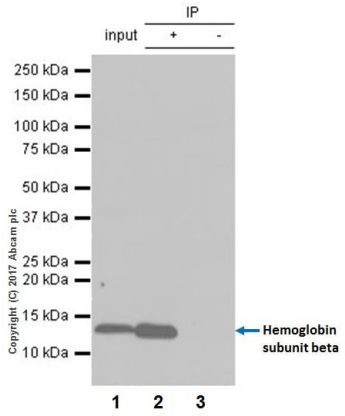
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Developed using the ECL technique.

Predicted band size: 15 kDa
Observed band size: 15 kDa

Exposure time: 3 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.



Immunoprecipitation - Anti-Hemoglobin subunit beta antibody [EPR20614] (ab214049)

Hemoglobin subunit beta was immunoprecipitated from 0.35 mg of TF-1 (human bone marrow erythroleukemia cell line) lysate with ab214049 at 1/40 dilution. Western blot was performed from the immunoprecipitate using ab214049 at 1/1,000 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/10,000 dilution

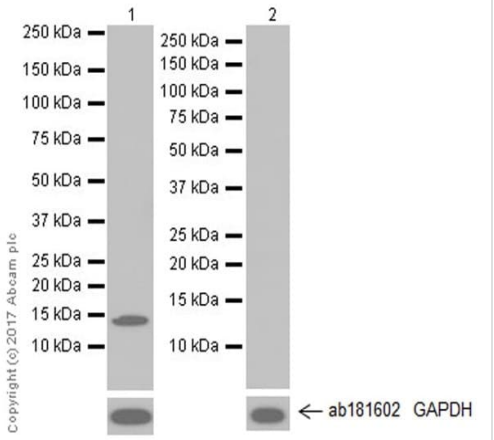
Lane 1: TF-1 whole cell lysate 10 µg (Input).

Lane 2: ab214049 IP in TF-1 whole cell lysate (+).

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of ab214049 in TF-1 whole cell lysate (-).

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 3 minutes.



Western blot - Anti-Hemoglobin subunit beta antibody [EPR20614] (ab214049)

All lanes : Anti-Hemoglobin subunit beta antibody [EPR20614] (ab214049) at 1/1000 dilution

Lane 1 : TF-1 (human bone marrow erythroleukemia cell line) whole cell lysate
Lane 2 : HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Developed using the ECL technique.

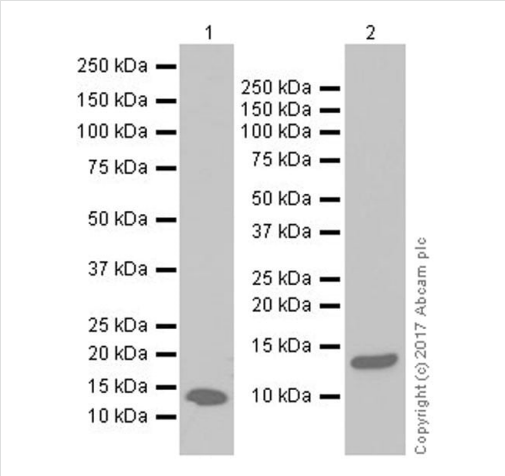
Predicted band size: 15 kDa
Observed band size: 13 kDa

Exposure time: 3 minutes

Blocking/Dilution buffer: 5% NFDM/TBST.

Positive Control: Anti-GAPDH antibody **ab181602** (below)

It has been shown that hemoglobin subunit beta/ba1 is not expressed in HEK-293 cells.



Western blot - Anti-Hemoglobin subunit beta antibody [EPR20614] (ab214049)

All lanes : Anti-Hemoglobin subunit beta antibody [EPR20614] (ab214049) at 1/10000 dilution

Lane 1 : Human fetal heart lysate at 10 µg
Lane 2 : Human lung lysate at 20 µg

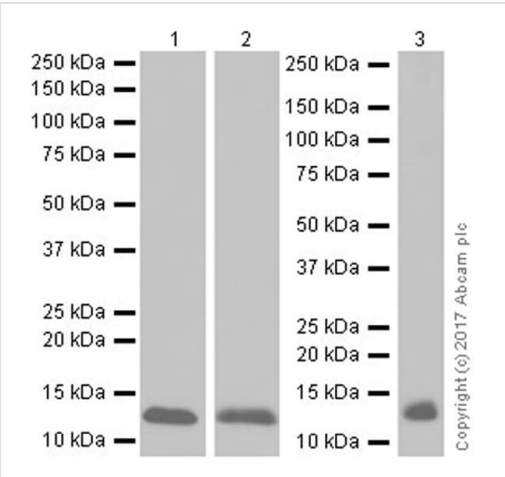
Secondary
All lanes : VeriBlot for IP Detection Reagent (HRP) (**ab131366**) at 1/4000 dilution

Developed using the ECL technique.

Predicted band size: 15 kDa
Observed band size: 13 kDa

Exposure time: 3 minutes

Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot - Anti-Hemoglobin subunit beta antibody [EPR20614] (ab214049)

Lanes 1 & 3 : Anti-Hemoglobin subunit beta antibody [EPR20614] (ab214049) at 1/1000 dilution
Lane 2 : Anti-Hemoglobin subunit beta antibody [EPR20614] (ab214049) at 1/10000 dilution

Lane 1 : Rat heart lysate at 20 µg
Lane 2 : Mouse heart lysate at 20 µg
Lane 3 : Mouse lung lysate at 10 µg

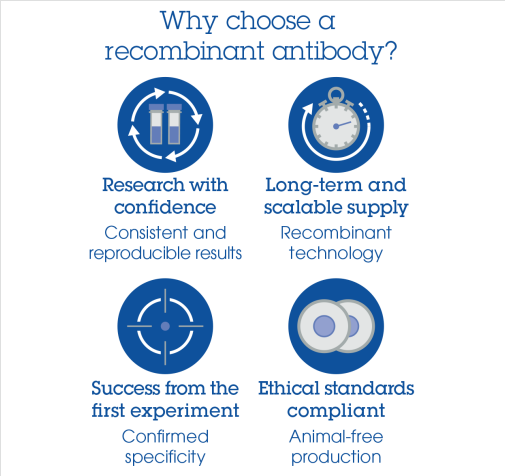
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Developed using the ECL technique.

Predicted band size: 15 kDa
Observed band size: 13 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure times: Lane 1-2: 3 minutes; Lane 3: 10 seconds.



Anti-Hemoglobin subunit beta antibody [EPR20614]

(ab214049)

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