

Product datasheet

Anti-GATA1 antibody [EP2819Y] ab76121

Recombinant RabMAb

2 Images

Overview

Product name	Anti-GATA1 antibody [EP2819Y]
Description	Rabbit monoclonal [EP2819Y] to GATA1
Host species	Rabbit
Tested applications	Suitable for: WB Unsuitable for: ICC/IF, IHC-P or IP
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: K562 and HEL whole cell lysates.
General notes	<p>This product has switched from a hybridoma to recombinant production method on 9th June 2023.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 0.05% BSA, 40% Glycerol (glycerin, glycerine), 59% PBS
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EP2819Y
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab76121 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		1/2000. Predicted molecular weight: 43 kDa.

Application notes

Is unsuitable for ICC/IF, IHC-P or IP.

Target

Function

Transcriptional activator which probably serves as a general switch factor for erythroid development. It binds to DNA sites with the consensus sequence [AT]GATA[AG] within regulatory regions of globin genes and of other genes expressed in erythroid cells.

Tissue specificity

Erythrocytes.

Involvement in disease

Defects in GATA1 are the cause of X-linked dyserythropoietic anemia and thrombocytopenia (XDAT) [MIM:300367]. XDAT is a disorder characterized by erythrocytes with abnormal size and shape, and paucity of platelets in peripheral blood. The bone marrow contains abundant and abnormally small megakaryocytes.

Defects in GATA1 are the cause of X-linked thrombocytopenia with beta-thalassemia (XLTT) [MIM:314050]; also known as thrombocytopenia, platelet dysfunction, hemolysis, and imbalanced globin synthesis. XLTT consists of an unusual form of thrombocytopenia with beta-thalassemia. Patients have splenomegaly and petechiae, moderate thrombocytopenia, prolonged bleeding time due to platelet dysfunction, reticulocytosis and unbalanced hemoglobin chain synthesis resembling that of beta-thalassemia minor.

Defects in GATA1 are the cause of anemia without thrombocytopenia X-linked (XLAWT) [MIM:300835]. XLAWT is a form of anemia characterized by abnormal morphology of erythrocytes and granulocytes in peripheral blood, bone marrow dysplasia with hypocellularity of erythroid and granulocytic lineages, and normal or increased number of megakaryocytes. Neutropenia of a variable degree is present in affected individuals.

Sequence similarities

Contains 2 GATA-type zinc fingers.

Domain

The two fingers are functionally distinct and cooperate to achieve specific, stable DNA binding. The first finger is necessary only for full specificity and stability of binding, whereas the second one is required for binding.

Post-translational modifications

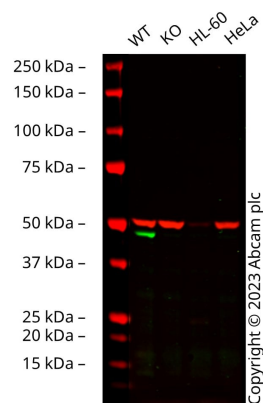
Highly phosphorylated on serine residues. Phosphorylation on Ser-310 is enhanced on erythroid differentiation. Phosphorylation on Ser-142 promotes sumoylation on Lys-137.

Sumoylation on Lys-137 is enhanced by phosphorylation on Ser-142 and by interaction with PIAS4. Sumoylation by SUMO1 has no effect on transcriptional activity.

Cellular localization

Nucleus.

Images



Western blot - Anti-GATA1 antibody [EP2819Y]
(ab76121)

All lanes : Anti-GATA1 antibody [EP2819Y] (ab76121) at 1/1000 dilution

Lane 1 : Wild-type K562 cell lysate

Lane 2 : GATA1 knockout K562 cell lysate

Lane 3 : HL-60 cell lysate

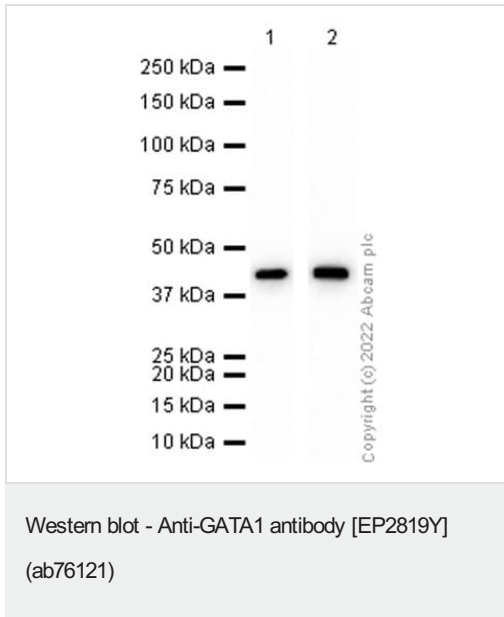
Lane 4 : HeLa cell lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 43 kDa

False colour image of Western blot: Anti-GATA1 antibody [EP2819Y] staining at 1/1000 dilution, shown in green; Mouse anti-Alpha Tubulin [DM1A] ([ab7291](#)) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab76121 was shown to bind specifically to GATA1. A band was observed at 47 kDa in wild-type K562 cell lysates with no signal observed at this size in GATA1 knockout cell line [ab285360](#) (knockout cell lysate [ab289686](#)). To generate this image, wild-type and GATA1 knockout K562 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3% milk in TBS-0.1% Tween[®] 20 (TBS-T) before incubation with primary antibodies overnight at 4°C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.



All lanes : Anti-GATA1 antibody [EP2819Y] (ab76121) at 1/2000 dilution

Lane 1 : K-562 (Human chronic myelogenous leukemia lymphoblast) whole cell lysate

Lane 2 : HEL (Human Erythroleukemia erythroblast) whole cell lysate

Lysates/proteins at 15 µg per lane.

Secondary

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

Predicted band size: 43 kDa

Observed band size: 43 kDa

Exposure time: 20 seconds

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

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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