

### Anti-GATA1 antibody [EPR17362] - ChIP Grade ab181544

KO 評価済 リコンビナント RabMAb

8 References 画像数 8

#### 製品の概要

製品名	Anti-GATA1 antibody [EPR17362] - ChIP Grade
製品の詳細	Rabbit monoclonal [EPR17362] to GATA1 - ChIP Grade
由来種	Rabbit
アプリケーション	適用あり: IHC-P, WB, ChIP, IP
種交差性	交差種: Human
免疫原	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
ポジティブ・コントロール	WB: K562, HEL and MOLT-4 whole cell lysates. IHC-P: Human colon and cervix carcinoma tissues. ICC/IF: K562 cells. IP: K562 whole cell extract. ChIP: Chromatin from K562 cells.
特記事項	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb® patents</a>.</p>

#### 製品の特性

製品の状態	Liquid
保存方法	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.
バッファー	Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
精製度	Protein A purified
ポリ/モノ	モノクローナル
クローン名	EPR17362
アイソタイプ	IgG

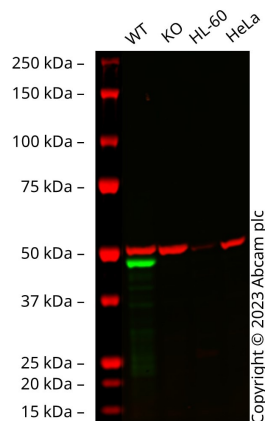
## アプリケーション

**The Abpromise guarantee**      **Abpromise保証は、** 次のテスト済みアプリケーションにおけるab181544の使用に適用されます  
アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
IHC-P		1/100. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
WB		1/10000. Detects a band of approximately 43 kDa (predicted molecular weight: 43 kDa).
ChIP		Use 5 µg for 25 µg of chromatin.
IP		1/70.

## ターゲット情報

機能	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.
組織特異性	Erythrocytes.
関連疾患	<p>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.</p> <p>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.</p> <p>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.</p>
配列類似性	Contains 2 GATA-type zinc fingers.
ドメイン	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.
翻訳後修飾	<p>Highly phosphorylated on serine residues. Phosphorylation on Ser-310 is enhanced on erythroid differentiation. Phosphorylation on Ser-142 promotes sumoylation on Lys-137.</p> <p>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.</p>
細胞内局在	Nucleus.



Western blot - Anti-GATA1 antibody [EPR17362] - ChIP Grade (ab181544)

**All lanes :** Anti-GATA1 antibody [EPR17362] - ChIP Grade (ab181544) at 1/10000 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

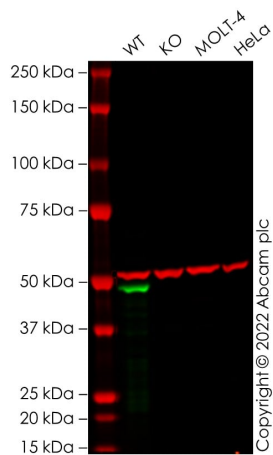
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

**Predicted band size:** 43 kDa

**Observed band size:** 47 kDa

False colour image of Western blot: Anti-GATA1 antibody [EPR17362] - ChIP Grade staining at 1/10000 dilution, shown in green; Mouse anti-Alpha Tubulin [DM1A] ([ab7291](#)) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab181544 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.



Western blot - Anti-GATA1 antibody [EPR17362] - ChIP Grade (ab181544)

**All lanes :** Anti-GATA1 antibody [EPR17362] - ChIP Grade (ab181544) at 1/10000 dilution

**Lane 1 :** Wild-type K562 cell lysate

**Lane 2 :** GATA1 [C116] knockout K562 cell lysate

**Lane 3 :** MOLT-4 cell lysate

**Lane 4 :** HeLa cell lysate

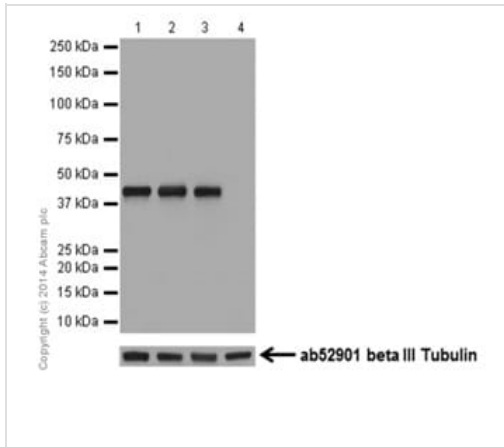
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

**Predicted band size:** 43 kDa

**Observed band size:** 48 kDa

False colour image of Western blot: Anti-GATA1 antibody [EPR17362] - ChIP Grade staining at 1/10000 dilution, shown in green; Mouse anti-Alpha Tubulin [DM1A] ([ab7291](#)) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab181544 was shown to bind specifically to GATA1. A band was observed at 48 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.



Western blot - Anti-GATA1 antibody [EPR17362] - ChIP Grade (ab181544)

**All lanes :** Anti-GATA1 antibody [EPR17362] - ChIP Grade (ab181544) at 1/10000 dilution

**Lane 1 :** K562 (Human chronic myelogenous leukemia cells from bone marrow) whole cell lysate

**Lane 2 :** HEL (Human bone marrow erythroleukemia) whole cell lysate

**Lane 3 :** MOLT-4 (Human lymphoblastic leukemia cell line) whole cell lysate

**Lane 4 :** HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysate

Lysates/proteins at 5 µg per lane.

### Secondary

**All lanes :** Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

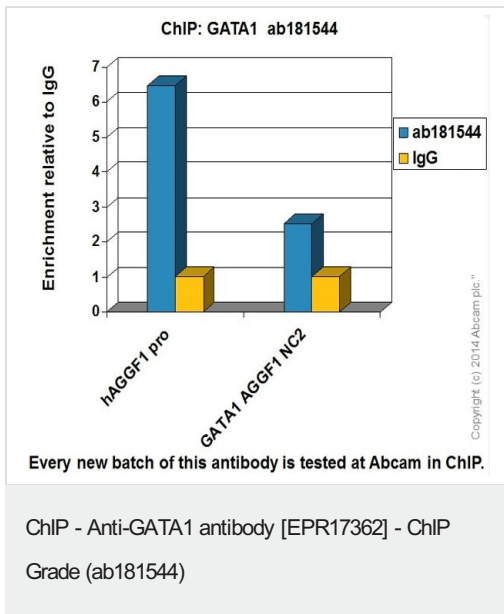
**Predicted band size:** 43 kDa

**Observed band size:** 43 kDa

**Exposure time:** 15 seconds

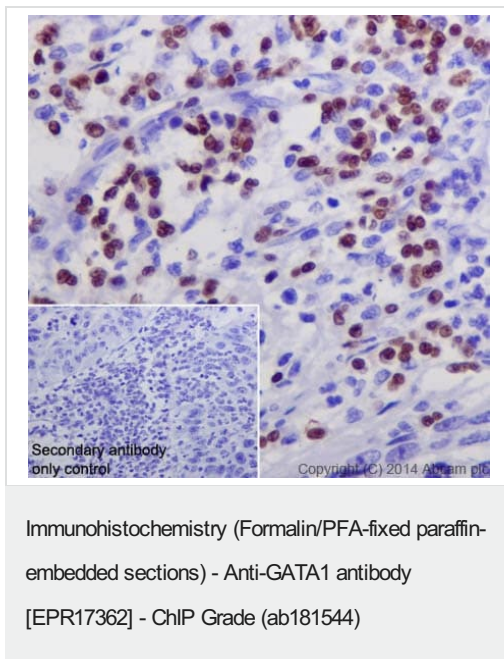
HeLa cells do not express GATA1. The expression profile observed in HeLa is consistent with the literature (PMID: 27010793, PMID: 17196618, PMID: 22235304, PMID: 20823267).

Blocking/Dilution buffer: 5% NFDm/TBST.



Chromatin was prepared from K562 (Human chronic myelogenous leukemia cells from bone marrow) cells according to the Abcam X-ChIP protocol. Cells were fixed with formaldehyde for 10 minutes. The ChIP was performed with 25µg of chromatin, 5µg of ab181544 (blue), and 20µl of Anti rabbit IgG sepharose beads. 5µg of rabbit normal IgG was added to the beads control (yellow). The immunoprecipitated DNA was quantified by real time PCR (Sybr green approach).

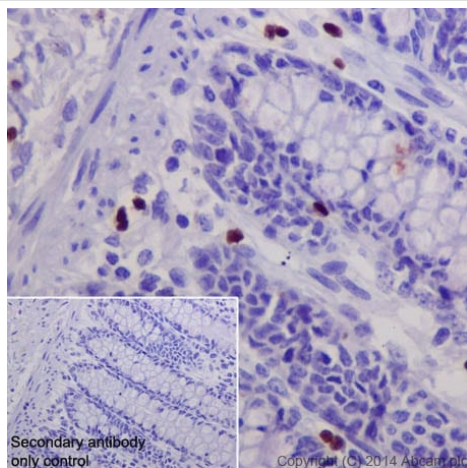
“pro” stands for promoter region, while “NC2” stands for negative control which is negative loci at the promoter region.



Immunohistochemical analysis of paraffin-embedded Human cervix carcinoma tissue labeling GATA1 with ab181544 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) secondary antibody at 1/500 dilution. Nuclear staining on leukocyte of Human cervical cancer is observed. Counterstained with Hematoxylin.

Negative control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

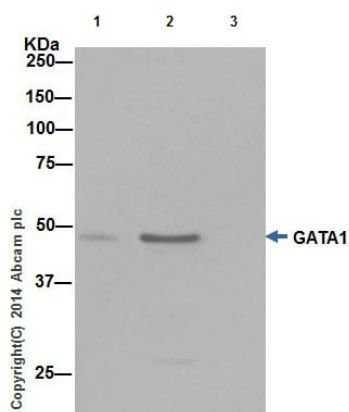


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GATA1 antibody  
[EPR17362] - ChIP Grade (ab181544)

Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling GATA1 with ab181544 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) secondary antibody at 1/500 dilution. Nuclear staining on leukocyte of Human colon stroma is observed. Counterstained with Hematoxylin.

Negative control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunoprecipitation - Anti-GATA1 antibody  
[EPR17362] - ChIP Grade (ab181544)

GATA1 was immunoprecipitated from 1mg of K562 (Human chronic myelogenous leukemia cells from bone marrow) whole cell extract with ab181544 at 1/70 dilution. Western blot was performed from the immunoprecipitate using ab181544 at 1/1000 dilution. Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG, was used as secondary antibody at 1/1500 dilution.

Lane 1: K562 whole cell extract 10 µg (Input). Lane 2: ab181544 IP in K562 whole cell extract. Lane 3: Rabbit monoclonal IgG ([ab172730](#)) instead of ab181544 in K562 whole cell extract.

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

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Anti-GATA1 antibody [EPR17362] - ChIP Grade  
(ab181544)

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

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