

## Product datasheet

# Anti-RUNX1 / AML1 antibody [EPR23044-100] ab240639

Recombinant **RabMAb**

★★★★☆ 12 Abreviews 7 Images

### Overview

<b>Product name</b>	Anti-RUNX1 / AML1 antibody [EPR23044-100]
<b>Description</b>	Rabbit monoclonal [EPR23044-100] to RUNX1 / AML1
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> Flow Cyt (Intra), WB, IP, IHC-P, ICC/IF <b>Unsuitable for:</b> ChIP
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	WB: THP-1, Jurkat and MOLT-4 lysates. IHC-P: Human breast carcinoma and Human breast tissues. ICC/IF: Jurkat cells. Flow Cyt (intra): Jurkat cells. IP: Jurkat cells.

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	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.
<b>Storage buffer</b>	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR23044-100
<b>Isotype</b>	IgG

### Applications

**The Abpromise guarantee** Our [Abpromise guarantee](#) covers the use of ab240639 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
Flow Cyt (Intra)		1/500.
WB	★★★★★ (5)	1/1000. Predicted molecular weight: 48 kDa.
IP		1/30.
IHC-P	★★★★★ (4)	1/2000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
ICC/IF	★★★★★ (3)	1/100.

#### Application notes

Is unsuitable for ChIP.

#### Target

#### Function

CBF binds to the core site, 5'-PYGPYGGT-3', of a number of enhancers and promoters, including murine leukemia virus, polyomavirus enhancer, T-cell receptor enhancers, LCK, IL-3 and GM-CSF promoters. The alpha subunit binds DNA and appears to have a role in the development of normal hematopoiesis. Isoform AML-1L interferes with the transactivation activity of RUNX1. Acts synergistically with ELF4 to transactivate the IL-3 promoter and with ELF2 to transactivate the mouse BLK promoter. Inhibits MYST4-dependent transcriptional activation.

#### Tissue specificity

Expressed in all tissues examined except brain and heart. Highest levels in thymus, bone marrow and peripheral blood.

#### Involvement in disease

Note=A chromosomal aberration involving RUNX1/AML1 is a cause of M2 type acute myeloid leukemia (AML-M2). Translocation t(8;21)(q22;q22) with RUNX1T1.

Note=A chromosomal aberration involving RUNX1/AML1 is a cause of therapy-related myelodysplastic syndrome (T-MDS). Translocation t(3;21)(q26;q22) with EAP or MECOM.

Note=A chromosomal aberration involving RUNX1/AML1 is a cause of chronic myelogenous leukemia (CML). Translocation t(3;21)(q26;q22) with EAP or MECOM.

Note=A chromosomal aberration involving RUNX1/AML1 is found in childhood acute lymphoblastic leukemia (ALL). Translocation t(12;21)(p13;q22) with TEL. The translocation fuses the 3'-end of TEL to the alternate 5'-exon of AML-1H.

Note=A chromosomal aberration involving RUNX1 is found in acute leukemia. Translocation t(11,21)(q13;q22) that forms a MACROD1-RUNX1 fusion protein.

Defects in RUNX1 are the cause of familial platelet disorder with associated myeloid malignancy (FPDMM) [MIM:601399]. FPDMM is an autosomal dominant disease characterized by qualitative and quantitative platelet defects, and propensity to develop acute myelogenous leukemia.

Note=A chromosomal aberration involving RUNX1/AML1 is found in therapy-related myeloid malignancies. Translocation t(16;21)(q24;q22) that forms a RUNX1-CBFA2T3 fusion protein.

Note=A chromosomal aberration involving RUNX1/AML1 is a cause of chronic myelomonocytic leukemia. Inversion inv(21)(q21;q22) with USP16.

### Sequence similarities

Contains 1 Runt domain.

### Domain

A proline/serine/threonine rich region at the C-terminus is necessary for transcriptional activation of target genes.

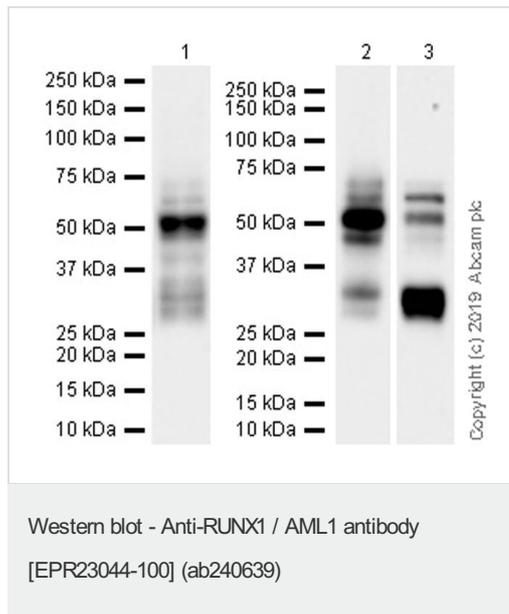
### Post-translational modifications

Phosphorylated in its C-terminus upon IL-6 treatment. Phosphorylation enhances interaction with MYST3.  
Methylated.

### Cellular localization

Nucleus.

## Images



**All lanes :** Anti-RUNX1 / AML1 antibody [EPR23044-100] (ab240639) at 1/1000 dilution

**Lane 1 :** THP-1 (human monocytic leukemia monocyte), whole cell lysate

**Lane 2 :** Jurkat (human T cell leukemia T lymphocyte), whole cell lysate

**Lane 3 :** MOLT-4 (human lymphoblastic leukemia T lymphoblast), whole cell lysate

Lysates/proteins at 10 µg per lane.

### Secondary

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

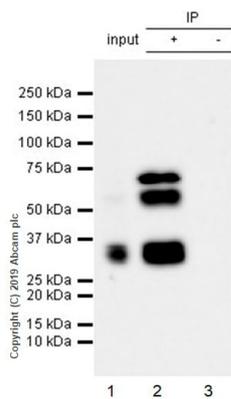
**Predicted band size:** 48 kDa

**Observed band size:** 27-55 kDa

Blocking and diluting buffer and concentration: 5% NFD/MTBST

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 23352661, 29296779). The RUNX1 gene has several isoforms, 3 major isotypes. RUNX1b is broadly expressed, and RUNX1a overexpression has been reported in AML.

Exposure time: Lane 1: 48 seconds Lanes 2-3: 26 seconds



Immunoprecipitation - Anti-RUNX1 / AML1 antibody [EPR23044-100] (ab240639)

RUNX1 / AML1 was immunoprecipitated from 0.35 mg Jurkat (human T cell leukemia T lymphocyte) whole cell lysate 10ug with ab240639 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab240639 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1/5000 dilution.

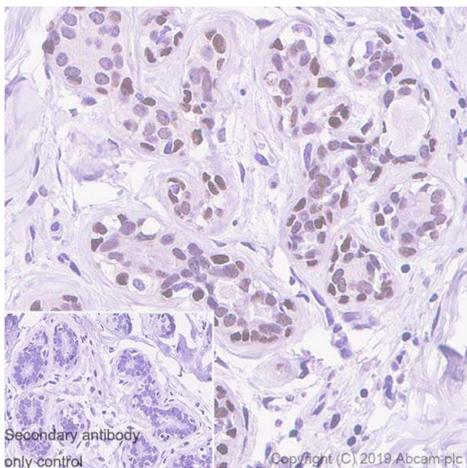
Lane 1: Jurkat (human T cell leukemia T lymphocyte) whole cell lysate 10ug

Lane 2: ab240639 IP in Jurkat whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab240639 in Jurkat whole cell lysate

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

Exposure time: 10 seconds

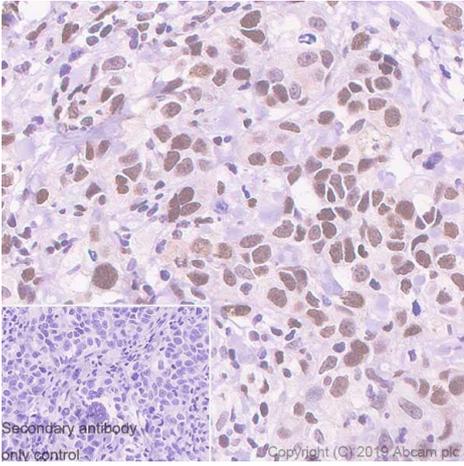


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RUNX1 / AML1 antibody [EPR23044-100] (ab240639)

Immunohistochemical analysis of paraffin-embedded Human breast tissue labeling RUNX1 / AML1 with ab240639 at 1/2000 dilution (0.25 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Nuclear staining on human breast tissue is observed. The section was incubated with ab240639 for 15 mins at room temperature. The immunostaining staining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.

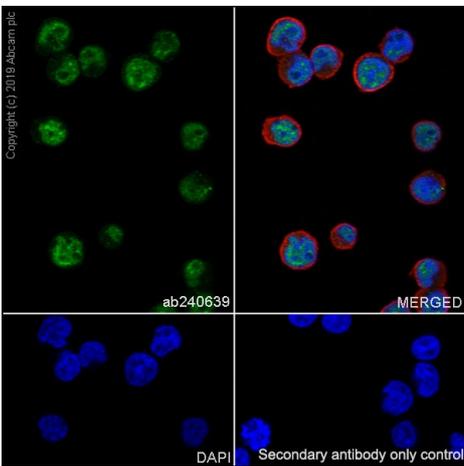


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RUNX1 / AML1 antibody [EPR23044-100] (ab240639)

Immunohistochemical analysis of paraffin-embedded Human breast carcinoma tissue labeling RUNX1 / AML1 with ab240639 at 1/2000 dilution (0.25 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Nuclear staining on human breast carcinoma (PMID: 24967588) tissue is observed. The section was incubated with ab240639 for 15 mins at room temperature. The immunostaining staining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

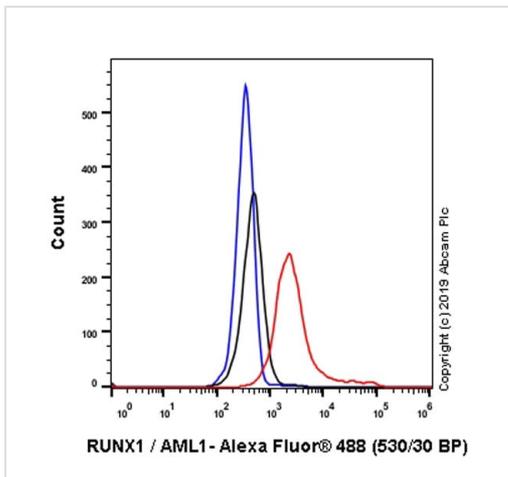
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.



Immunocytochemistry/ Immunofluorescence - Anti-RUNX1 / AML1 antibody [EPR23044-100] (ab240639)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized Jurkat (Human T cell leukemia T lymphocyte) cells labelling RUNX1 / AML1 with ab240639 at 1/100 dilution, followed by ab240639 anti-RUNX1/AML1 ab150077 AlexaFluor®488 Goat anti-Rabbit secondary antibody at 1/1000 dilution (Green). Confocal image showing strong nuclear and weak cytoplasmic staining in Jurkat cell line is observed. Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab240639 anti-RUNX1/AML1 ab150077 AlexaFluor®488 Goat anti-Rabbit secondary at 1/1000 dilution.



Intracellular flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Jurkat (Human T cell leukemia T lymphocyte) cells labelling RUNX1 / AML1 with ab240639 at 1/500 (Red) compared with a Rabbit monoclonal IgG (ab172730, Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.

Flow Cytometry (Intracellular) - Anti-RUNX1 / AML1 antibody [EPR23044-100] (ab240639)

**Why choose a recombinant antibody?**

 <b>Research with confidence</b> Consistent and reproducible results	 <b>Long-term and scalable supply</b> Recombinant technology
 <b>Success from the first experiment</b> Confirmed specificity	 <b>Ethical standards compliant</b> Animal-free production

Anti-RUNX1 / AML1 antibody [EPR23044-100] (ab240639)

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

**Our Abpromise to you: Quality guaranteed and expert technical support**

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

## Terms and conditions

---

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors