

## Product datasheet

### Anti-c-Kit antibody [EPR22566-344] ab256345

Recombinant RabMAb

[8 References](#) [6 Images](#)

#### Overview

<b>Product name</b>	Anti-c-Kit antibody [EPR22566-344]
<b>Description</b>	Rabbit monoclonal [EPR22566-344] to c-Kit
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-P <b>Unsuitable for:</b> Flow Cyt, ICC/IF, IHC-Fr or IP
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat
<b>Immunogen</b>	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	WB: Rat brain, cerebellum and kidney tissue lysates, Mouse brain and cerebellum tissue lysates. IHC-P: Mouse cerebellum and testis tissue, rat testis tissue.
<b>General notes</b>	<b>Not recommended for human IHC.</b>  This product is a recombinant monoclonal antibody, which offers several advantages including: <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> For more information <a href="#">see here</a> .  Our RabMAb <sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a> .

#### 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, 0.05% BSA
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal

**Clone number**                      EPR22566-344

**Isotype**                              IgG

## Applications

**The Abpromise guarantee**              Our **Abpromise guarantee** covers the use of ab256345 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. Predicted molecular weight: 109 kDa.
IHC-P		1/4000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. Not recommended for human IHC.

**Application notes**                      Is unsuitable for Flow Cyt, ICC/IF, IHC-Fr or IP.

## Target

**Function**                                      Tyrosine-protein kinase that acts as cell-surface receptor for the cytokine KITLG/SCF and plays an essential role in the regulation of cell survival and proliferation, hematopoiesis, stem cell maintenance, gametogenesis, mast cell development, migration and function, and in melanogenesis. In response to KITLG/SCF binding, KIT can activate several signaling pathways. Phosphorylates PIK3R1, PLCG1, SH2B2/APS and CBL. Activates the AKT1 signaling pathway by phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase. Activated KIT also transmits signals via GRB2 and activation of RAS, RAF1 and the MAP kinases MAPK1/ERK2 and/or MAPK3/ERK1. Promotes activation of STAT family members STAT1, STAT3, STAT5A and STAT5B. Activation of PLCG1 leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate. KIT signaling is modulated by protein phosphatases, and by rapid internalization and degradation of the receptor. Activated KIT promotes phosphorylation of the protein phosphatases PTPN6/SHP-1 and PTPRU, and of the transcription factors STAT1, STAT3, STAT5A and STAT5B. Promotes phosphorylation of PIK3R1, CBL, CRK (isoform Crk-II), LYN, MAPK1/ERK2 and/or MAPK3/ERK1, PLCG1, SRC and SHC1.

**Tissue specificity**                      Isoform 1 and isoform 2 are detected in spermatogonia and Leydig cells. Isoform 3 is detected in round spermatids, elongating spermatids and spermatozoa (at protein level). Widely expressed. Detected in the hematopoietic system, the gastrointestinal system, in melanocytes and in germ cells.

**Involvement in disease**                      Piebald trait  
Gastrointestinal stromal tumor  
Testicular germ cell tumor  
Leukemia, acute myelogenous

**Sequence similarities**                      Belongs to the protein kinase superfamily. Tyr protein kinase family. CSF-1/PDGF receptor subfamily.  
Contains 5 Ig-like C2-type (immunoglobulin-like) domains.  
Contains 1 protein kinase domain.

**Post-translational**                      Ubiquitinated by SOCS6. KIT is rapidly ubiquitinated after autophosphorylation induced by

## modifications

KITLG/SCF binding, leading to internalization and degradation.

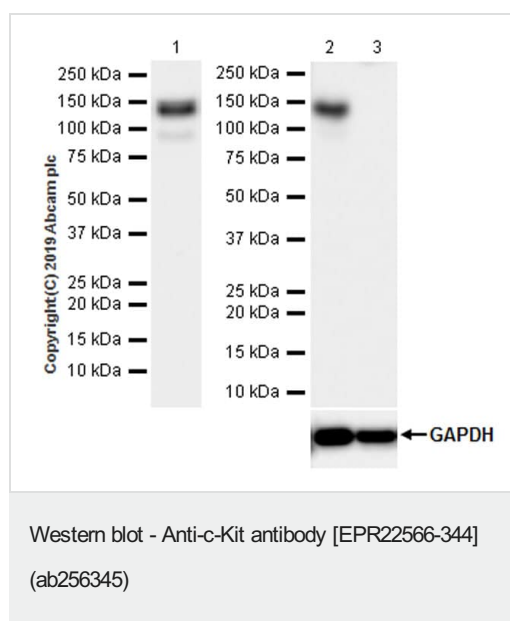
Autophosphorylated on tyrosine residues. KITLG/SCF binding enhances autophosphorylation.

Isoform 1 shows low levels of tyrosine phosphorylation in the absence of added KITLG/SCF (in vitro). Kinase activity is down-regulated by phosphorylation on serine residues by protein kinase C family members. Phosphorylation at Tyr-568 is required for interaction with PTPN11/SHP-2, CRK (isoform Crk-II) and members of the SRC tyrosine-protein kinase family. Phosphorylation at Tyr-570 is required for interaction with PTPN6/SHP-1. Phosphorylation at Tyr-703, Tyr-823 and Tyr-936 is important for interaction with GRB2. Phosphorylation at Tyr-721 is important for interaction with PIK3R1. Phosphorylation at Tyr-823 and Tyr-936 is important for interaction with GRB7.

## Cellular localization

Cell membrane and Cytoplasm. Detected in the cytoplasm of spermatozoa, especially in the equatorial and subacrosomal region of the sperm head.

## Images



**All lanes :** Anti-c-Kit antibody [EPR22566-344] (ab256345) at 1/1000 dilution

**Lane 1 :** Mouse brain tissue lysate

**Lane 2 :** Mouse cerebellum tissue lysate

**Lane 3 :** NIH/3T3 (mouse embryonic fibroblast) whole cell lysate

Lysates/proteins at 20 µg per lane.

### Secondary

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

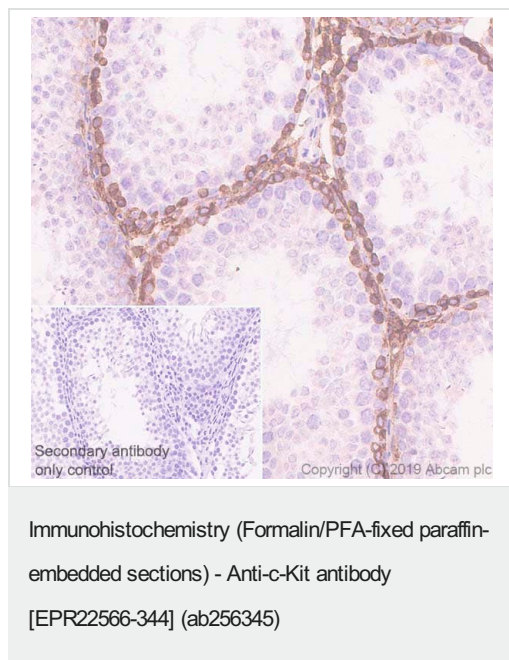
**Predicted band size:** 109 kDa

**Observed band size:** 120-140 kDa

The molecular weight observed is consistent with what has been described in the literature (PMID: 29176653; PMID: 23637779).

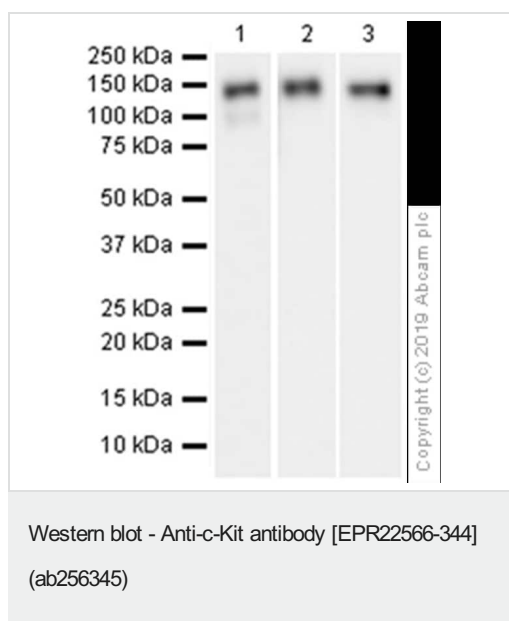
**Negative control:** NIH/3T3 (PMID: 29622475; PMID: 11522667)

Exposure time: Lane 1: 15 secs; Lanes 2-3: 26 secs.



Immunohistochemical analysis of paraffin-embedded rat testis tissue labeling c-Kit with ab256345 at 1/4000 dilution (0.16 µg/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on spermatogonia of rat testis (PMID: 29324782). The section was incubated with ab256345 for 15 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20mins.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).



**All lanes** : Anti-c-Kit antibody [EPR22566-344] (ab256345) at 1/100000 dilution

**Lane 1** : Rat brain tissue lysate

**Lane 2** : Rat cerebellum tissue lysate

**Lane 3** : Rat kidney tissue lysate

Lysates/proteins at 20 µg per lane.

### Secondary

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

**Predicted band size:** 109 kDa

**Observed band size:** 120-140 kDa

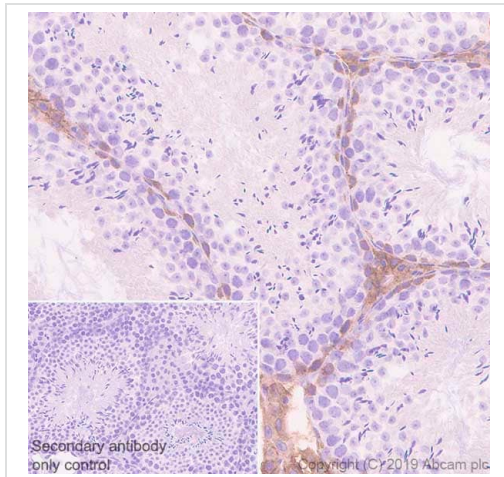
Blocking/Diluting buffer and concentration: 5% NFDM/TBST

Exposure time:

Lane 1: 3.25 seconds

Lane 2-3: 7.75 seconds

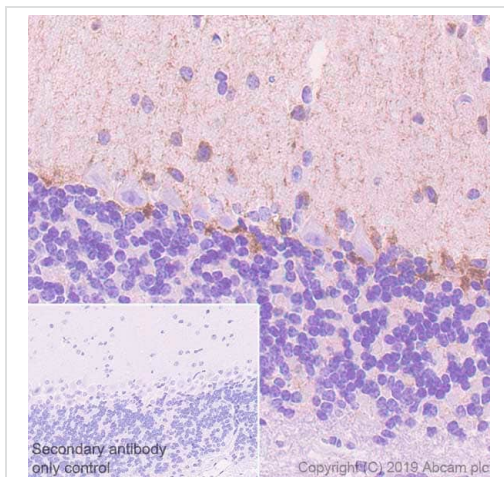
The molecular weight observed is consistent with what has been described in the literature (PMID: 29176653; PMID: 23637779)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-c-Kit antibody [EPR22566-344] (ab256345)

Immunohistochemical analysis of paraffin-embedded mouse testis tissue labeling c-Kit with ab256345 at 1/4000 dilution (0.16 µg/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on spermatogonia and Leydig cells of mouse testis (PMID: 29324782). The section was incubated with ab256345 for 15 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20mins.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-c-Kit antibody [EPR22566-344] (ab256345)

Immunohistochemical analysis of paraffin-embedded mouse cerebellum tissue labeling c-Kit with ab256345 at 1/4000 dilution (0.16 µg/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining in Purkinje cells of mouse cerebellum (PMID: 15100248). The section was incubated with ab256345 for 15 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with hematoxylin. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20mins. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

### 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-c-Kit antibody [EPR22566-344] (ab256345)

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

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