


## Product datasheet

### Anti-ZAP70 antibody [E267] ab32410

Recombinant **RabMAb**

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#### Overview

<b>Product name</b>	Anti-ZAP70 antibody [E267]
<b>Description</b>	Rabbit monoclonal [E267] to ZAP70
<b>Host species</b>	Rabbit
<b>Specificity</b>	ab32410 recognises Zap-70, a Syk-family protein tyrosine kinase.
<b>Tested applications</b>	<b>Suitable for:</b> WB <b>Unsuitable for:</b> ICC/IF or IHC
<b>Species reactivity</b>	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Mouse, Rat 
<b>Immunogen</b>	Synthetic peptide within Human ZAP70 aa 300-400 (N terminal). The exact sequence is proprietary.
<b>Positive control</b>	Jurkat whole cell lysate ( <a href="#">ab7899</a> )
<b>General notes</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. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
<b>Storage buffer</b>	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 49% PBS, 50% Glycerol (glycerin, glycerine), 0.05% BSA
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal

Clone number	E267
Isotype	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab32410 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

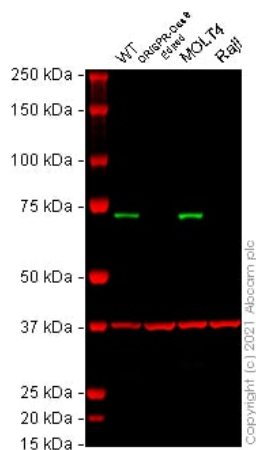
Application	Abreviews	Notes
WB		1/500. Predicted molecular weight: 70 kDa.

**Application notes** Is unsuitable for ICC/IF or IHC.

## Target

<b>Function</b>	Plays a role in T-cell development and lymphocyte activation. Essential for TCR-mediated IL-2 production. Isoform 1 induces TCR-mediated signal transduction, isoform 2 does not.
<b>Tissue specificity</b>	Expressed in T- and natural killer cells.
<b>Involvement in disease</b>	Defects in ZAP70 are the cause of selective T-cell defect (STD) [MIM:176947]. STD is an autosomal recessive form of severe combined immunodeficiency characterized by a selective absence of CD8-type T-cells.
<b>Sequence similarities</b>	Belongs to the protein kinase superfamily. Tyr protein kinase family. SYK/ZAP-70 subfamily. Contains 1 protein kinase domain. Contains 2 SH2 domains.
<b>Domain</b>	The SH2 domains bind to the phosphorylated tyrosine-based activation motif (TAM) of CD3Z and the non-canonical phosphorylated tyrosine-based activation motif (TAM) of RHOH.
<b>Post-translational modifications</b>	Phosphorylated on tyrosine residues upon T-cell antigen receptor (TCR) stimulation. Tyr-319 phosphorylation is essential for full activity.
<b>Cellular localization</b>	Cytoplasm. Cell membrane. After antigen stimulation, isoform 1 concentrates at the immunological synapse and isoform 2 remains cytoplasmic. Co-localizes together with RHOH in the immunological synapse. RHOH is required for its proper localization to the cell membrane and cytoskeleton fractions in the thymocytes.

## Images



Western blot - Anti-ZAP70 antibody [E267]  
(ab32410)

**All lanes :** Anti-ZAP70 antibody [E267] (ab32410) at 1/500 dilution

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

**Lane 2 :** ZAP70 CRISPR-Cas9 edited Jurkat cell lysate

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

**Lane 4 :** Raji cell lysate

Lysates/proteins at 20 µg per lane.

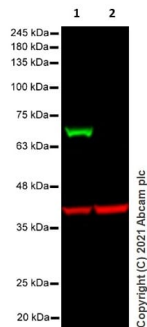
Performed under reducing conditions.

**Predicted band size:** 70 kDa

**Observed band size:** 70 kDa

False colour image of Western blot: Anti-ZAP70 antibody [E267] staining at 1/500 dilution, shown in green; Mouse anti-GAPDH antibody [6C5] ([ab8245](#)) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab32410 was shown to bind specifically to ZAP70. A band was observed at 70 kDa in wild-type Jurkat cell lysates with no signal observed at this size in ZAP70 CRISPR-Cas9 edited cell line [ab273841](#) (CRISPR-Cas9 edited cell lysate [ab273795](#)). The band observed in the CRISPR-Cas9 edited lysate lane below 70 kDa is likely to represent a truncated form of ZAP70. This has not been investigated further and the functional properties of the gene product have not been determined. To generate this image, wild-type and ZAP70 CRISPR-Cas9 edited Jurkat 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 (IRDye® 800CW) preabsorbed ([ab216773](#)) and Goat

anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) at 1/20000 dilution.



Western blot - Anti-ZAP70 antibody [E267] (ab32410)

**All lanes :** Anti-ZAP70 antibody [E267] (ab32410) at 1/1000 dilution

**Lane 1 :** Jurkat (Human T cell leukemia T lymphocyte) whole cell lysate

**Lane 2 :** Raji (Human Burkitt's lymphoma B lymphocyte) whole cell lysate

Lysates/proteins at 20 µg per lane.

### Secondary

**All lanes :** Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) at 1/10000 dilution (Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed)

**Predicted band size:** 70 kDa

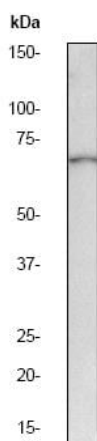
Anti-GAPDH antibody, **ab8245** (1/20000) was used as a primary antibody for the loading control and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed, **ab216776** (1/10000) was used as a loading control secondary antibody.

Lanes 1-2: Merged signal (red and green). Green – ab32410 observed at 70 kDa. Red - loading control **ab8245** observed at 36 kDa.

ab32410 and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1 in 10000 dilution for 1 hour at room temperature before imaging.

The expression profile observed in Raji is consistent with the literature (PMID: 25275600).

Negative control: Raji (PMID: 25275600)



Anti-ZAP70 antibody [E267] (ab32410) at 1/500 dilution + Jurkat cell lysates

**Predicted band size:** 70 kDa

**Observed band size:** 70 kDa

Western blot analysis on Jurkat Cell lysate.

Western blot - Anti-ZAP70 antibody [E267] (ab32410)

#### 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-ZAP70 antibody [E267] (ab32410)

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

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