

## Product datasheet

### Anti-CD3 zeta antibody [BL-336-1B2] ab243874

KO **VALIDATED** Recombinant

7 Images

#### Overview

Product name	Anti-CD3 zeta antibody [BL-336-1B2]
Description	Rabbit monoclonal [BL-336-1B2] to CD3 zeta
Host species	Rabbit
Tested applications	<b>Suitable for:</b> WB, IHC-P, IP
Species reactivity	<b>Reacts with:</b> Human
Immunogen	Synthetic peptide within Human CD3 zeta aa 150-164 (C terminal). The exact sequence is proprietary. NP_932170.1 and Gene ID 919. Database link: <a href="#">P20963</a>
Positive control	WB: K562, Jurkat, HeLa, SR, HEK293T, HepG2 and MOLT4 whole cell lysate. IHC-P: Human tonsil tissue, human lung cancer tissue. IP: Jurkat whole cell lysate.
General notes	This product is sold under License from Bethyl Laboratories, Inc.

#### Properties

Form	Liquid
Storage instructions	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.
Storage buffer	pH: 7.8 Preservative: 0.09% Sodium azide Constituents: 98% Borate buffered saline, 0.1% BSA
Purification notes	Recombinant antibody was purified from cell culture supernatant.
Clonality	Monoclonal
Clone number	BL-336-1B2
Isotype	IgG

#### Applications

The **Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab243874 in the following tested applications.

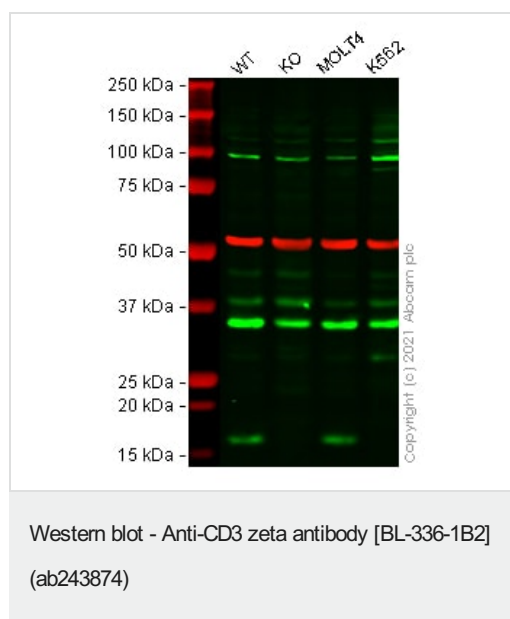
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000.
IHC-P		1/100 - 1/500. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
IP		Use at an assay dependent concentration. Use 20µl/mg lysate.

## Target

<b>Function</b>	Probable role in assembly and expression of the TCR complex as well as signal transduction upon antigen triggering.
<b>Involvement in disease</b>	Defects in CD247 are the cause of immunodeficiency due to defect in CD3-zeta (CD3ZID) [MIM:610163]. An immunological deficiency characterized by T-cells impaired immune response to alloantigens, tetanus toxoid and mitogens.
<b>Sequence similarities</b>	Belongs to the CD3Z/FCER1G family. Contains 3 ITAM domains.
<b>Domain</b>	The ITAM domains mediate interaction with SHB.
<b>Post-translational modifications</b>	Phosphorylated on Tyr residues after T-cell receptor triggering.
<b>Cellular localization</b>	Membrane.

## Images



**All lanes :** Anti-CD3 zeta antibody [BL-336-1B2] (ab243874) at 1/1000 dilution

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

**Lane 2 :** CD247 knockout Jurkat cell lysate

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

**Lane 4 :** K562 cell lysate

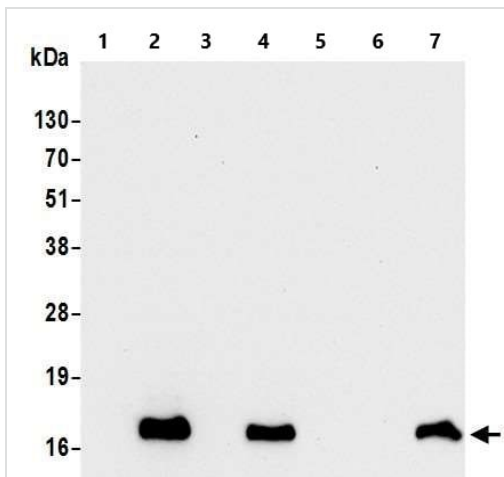
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

**Observed band size:** 16 kDa

False colour image of Western blot: Anti-CD3 zeta antibody [BL-

336-1B2] 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, ab243874 was shown to bind specifically to CD3 zeta. A band was observed at 16 kDa in wild-type Jurkat cell lysates with no signal observed at this size in CD247 knockout cell line [ab273856](#) (knockout cell lysate [ab273810](#)). To generate this image, wild-type and CD247 knockout 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<sup>®</sup> 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<sup>®</sup> 800CW) preabsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye<sup>®</sup> 680RD) preabsorbed ([ab216776](#)) at 1/20000 dilution.



Western blot - Anti-CD3 zeta antibody [BL-336-1B2] (ab243874)

**All lanes :** Anti-CD3 zeta antibody [BL-336-1B2] (ab243874) at 1/1000 dilution

**Lane 1 :** K562 whole cell lysate

**Lane 2 :** Jurkat whole cell lysate

**Lane 3 :** HeLa whole cell lysate

**Lane 4 :** SR whole cell lysate

**Lane 5 :** HEK293T whole cell lysate

**Lane 6 :** HepG2 whole cell lysate

**Lane 7 :** MOLT4 whole cell lysate

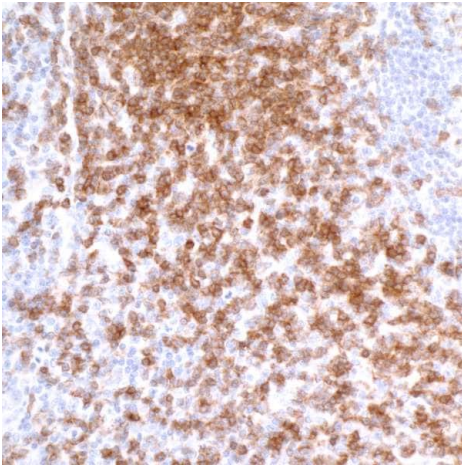
Lysates/proteins at 50 µg per lane.

### Secondary

**All lanes :** HRP-conjugated goat anti-rabbit IgG

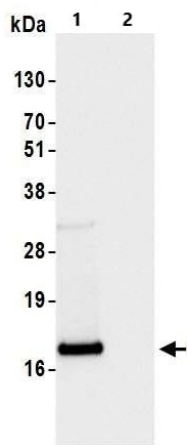
**Exposure time:** 10 seconds

Lysates prepared using NETN lysis buffer.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD3 zeta antibody [BL-336-1B2] (ab243874)

Immunohistochemical analysis of formalin-fixed, paraffin-embedded human tonsil tissue labeling CD247/CD3Z with ab243874. HRP-conjugated goat anti-rabbit IgG was used as the secondary antibody, with DAB as substrate.



Immunoprecipitation - Anti-CD3 zeta antibody [BL-336-1B2] (ab243874)

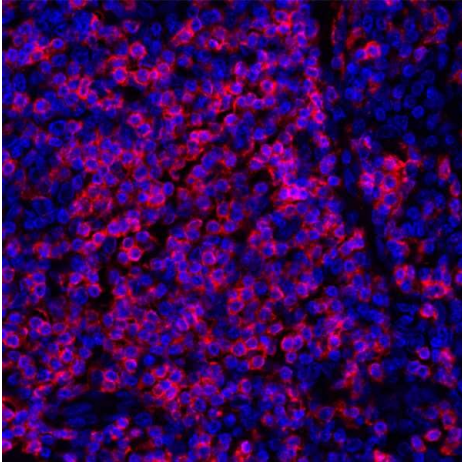
CD247/CD3Z was immunoprecipitated from 1mg of Jurkat whole cell lysate with ab243874 at 20  $\mu$ l/mg lysate. Western blot was performed from the immunoprecipitate using [ab264158](#) at a 1/1000 dilution.

**Lane 1:** ab243874 IP in Jurkat whole cell lysate.

**Lane 2:** Control IgG.

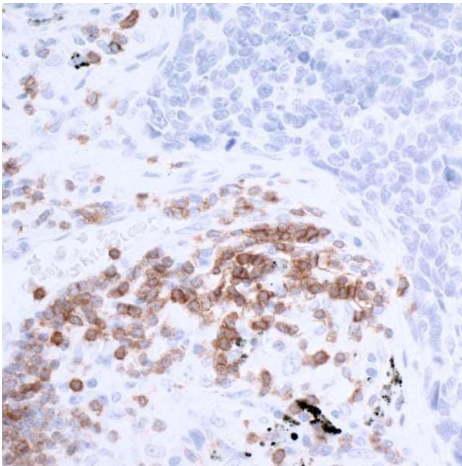
**Detection:** Chemiluminescence.

Lysate prepared using NETN lysis buffer.



Immunohistochemical analysis of formalin-fixed, paraffin-embedded human tonsil tissue, labeling CD247/CD3Z with ab243874. HRP-conjugated goat anti-rabbit IgG used as the secondary antibody. DAPI counterstain.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD3 zeta antibody [BL-336-1B2] (ab243874)



Immunohistochemical analysis of formalin-fixed, paraffin-embedded human lung cancer tissue labeling CD247/CD3Z with ab243874. HRP-conjugated goat anti-rabbit IgG was used as the secondary antibody, with DAB as the substrate.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD3 zeta antibody [BL-336-1B2] (ab243874)

### 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-CD3 zeta antibody [BL-336-1B2] (ab243874)

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

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