

Product datasheet

Anti-CD3 antibody ab16044

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Overview

Product name	Anti-CD3 antibody
Description	Rabbit polyclonal to CD3
Host species	Rabbit
Tested applications	Suitable for: IP, WB Unsuitable for: IHC
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide conjugated to KLH derived from within residues 150 to the C-terminus of Human CD3. Read Abcam's proprietary immunogen policy (Peptide available as ab16206 .)
Positive control	Recombinant Human CD3 epsilon protein (ab114153) can be used as a positive control in WB. This antibody gave a positive signal in Jurkat whole cells and thymus tissue from Mouse and Rat.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

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 or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS
Purity	Immunogen affinity purified

Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.

Clonality Polyclonal
Isotype IgG

Applications

The Abpromise guarantee Our [Abpromise guarantee](#) covers the use of ab16044 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
IP		Use a concentration of 5 µg/ml.
WB		Use a concentration of 0.5 µg/ml. Detects a band of approximately 23 kDa (predicted molecular weight: 23 kDa).

Application notes Is unsuitable for IHC.

Target

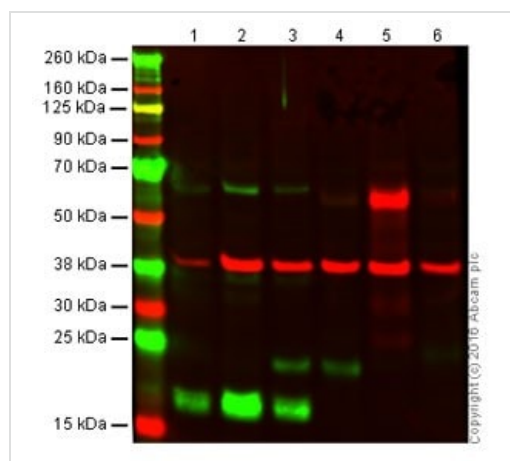
Function The CD3 complex mediates signal transduction.

Involvement in disease Defects in CD3D are a cause of severe combined immunodeficiency autosomal recessive T-cell-negative/B-cell-positive/NK-cell-positive (T(-)/B(+)/NK(+)) SCID [MIM:608971]. A form of severe combined immunodeficiency (SCID), a genetically and clinically heterogeneous group of rare congenital disorders characterized by impairment of both humoral and cell-mediated immunity, leukopenia, and low or absent antibody levels. Patients present in infancy recurrent, persistent infections by opportunistic organisms. The common characteristic of all types of SCID is absence of T-cell-mediated cellular immunity due to a defect in T-cell development.

Sequence similarities Contains 1 ITAM domain.

Cellular localization Membrane.

Images



Western blot - Anti-CD3 antibody (ab16044)

All lanes : Anti-CD3 antibody (ab16044) at 1 µg/ml

Lane 1 : THP1 whole cell lysate (-ve control)

Lane 2 : Raji whole cell lysate (-ve control)

Lane 3 : Jurkat whole cell lysate

Lane 4 : Human Thymus tissue lysate

Lane 5 : Mouse Thymus tissue lysate

Lane 6 : Rat Thymus tissue lysate

Lysates/proteins at 15 µg per lane.

Secondary

All lanes : Goat anti-Rabbit IgG H&L (IRDye® 800CW)

preadsorbed ([ab216773](#)) at 1/10000 dilution

Performed under reducing conditions.

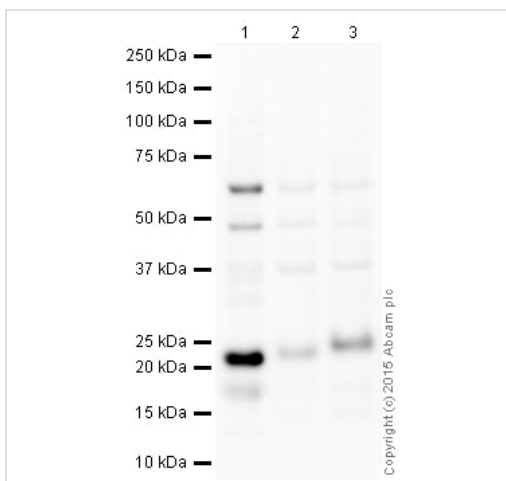
Predicted band size: 23 kDa

Observed band size: 23 kDa

Additional bands at: 17 kDa. We are unsure as to the identity of these extra bands.

Lanes 1 - 6: Merged signal (red and green). Green – [ab16044](#) observed at 23 kDa. Red - loading control, [ab8245](#), observed at 37 kDa.

This blot was produced using a 4-12% Bis-tris gel under the MES buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using Licor blocking buffer before being incubated with [ab16044](#) and [ab8245](#) (loading control) overnight at 4°C. Antibody binding was detected using Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed ([ab216776](#)) at a 1:10000 dilution for 1hr at room temperature and then imaged.



Western blot - Anti-CD3 antibody ([ab16044](#))

All lanes : Anti-CD3 antibody ([ab16044](#)) at 1 µg/ml

Lane 1 : Jurkat (Human T cell lymphoblast-like cell line) Whole Cell Lysate at 10 µg

Lane 2 : Thymus (Mouse) Tissue Lysate at 20 µg

Lane 3 : Thymus (Rat) Tissue Lysate at 20 µg

Secondary

All lanes : Anti-Rabbit IgG VHH Single Domain (HRP) ([ab191866](#)) at 1/50000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 23 kDa

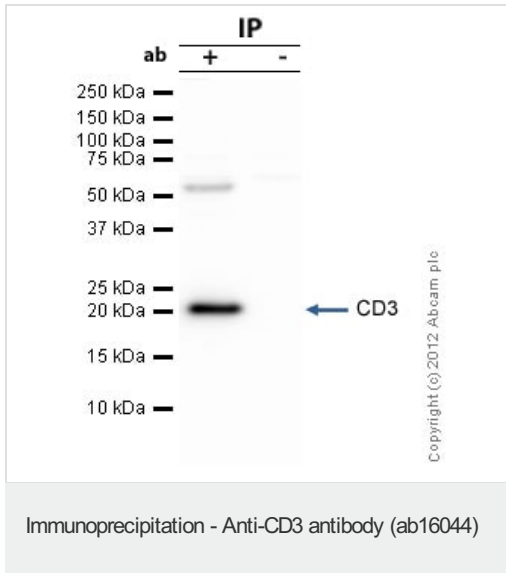
Observed band size: 23 kDa

Additional bands at: 18 kDa, 48 kDa, 62 kDa. We are unsure as

to the identity of these extra bands.

Exposure time: 8 minutes

This blot was produced using a 4-12% Bis-tris gel under the MES buffer system. The gel was run at 200V for 35 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 2% Bovine Serum Albumin before being incubated with ab16044 overnight at 4°C. Antibody binding was detected using an anti-rabbit IgG VHH single domain antibody conjugated to HRP, and visualised using ECL development solution [ab133406](#).



CD3 was immunoprecipitated using 0.5mg Jurkat whole cell extract, 5µg of Rabbit polyclonal to CD3 and 50µl of protein G magnetic beads (+). No antibody was added to the control (-). The antibody was incubated under agitation with Protein G beads for 10min, Jurkat whole cell extract lysate diluted in RIPA buffer was added to each sample and incubated for a further 10min under agitation.

Proteins were eluted by addition of 40µl SDS loading buffer and incubated for 10min at 70°C; 10µl of each sample was separated on a SDS PAGE gel, transferred to a nitrocellulose membrane, blocked with 5% BSA and probed with ab16044.

Secondary: Clean-Blot IP Detection Reagent (HRP) at 1/500 dilution.

Band: 23kDa; CD3

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