abcam

Product datasheet

Anti-IL-6 antibody [EPR21711] - BSA and Azide free ab233707

KO VALIDATED Recombinant RabMAb

5 Images

Overview

Product name	Anti-IL-6 antibody [EPR21711] - BSA and Azide free
Description	Rabbit monoclonal [EPR21711] to IL-6 - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** ICC/IF, IP, Flow Cyt, WB
Species reactivity	**Reacts with:** Human
Immunogen	Recombinant fragment within Human IL-6 aa 1 to the C-terminus. The exact sequence is proprietary. Database link: P05231
Positive control	WB: LPS/BFA-treated HUVEC whole cell lysate; Wild-type A549 IL-1ß (ab259387) (20 ng/ml, 24h) and Brefeldin A (ab120299)-treated (5 ug/ml for the last 4h) cell lysate ICC/IF: LPS/BFA-treated HUVEC cells. Flow Cytometry: LPS/BFA-treated HUVEC cells. IP: LPS/BFA-treated HUVEC whole cell lysate.
General notes	Ab233707 is the carrier-free version of ab233706. This format is designed for use in antibody labeling, including fluorochromes, metal isotopes, oligonucleotides, enzymes. Our carrier-free formats are supplied in a buffer free of BSA, sodium azide and glycerol for higher conjugation efficiency. Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. ab233707 is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm. *Maxpar® is a trademark of Fluidigm Canada Inc.* This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information see here. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit

monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.

Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.

We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.

In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.

We are also updating the applications & species that this product has been "predicted to work with," however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

Please check that this product meets your needs before purchasing. 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, as well as customer reviews and Q&As.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR21711
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab233707** 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
ICC/IF		Use at an assay dependent concentration.
IP		Use at an assay dependent concentration.
Flow Cyt		Use at an assay dependent concentration.

Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Detects a band of approximately 21 kDa (predicted molecular weight: 23 kDa).

Target

Function

Cytokine with a wide variety of biological functions. It is a potent inducer of the acute phase response. Plays an essential role in the final differentiation of B-cells into Ig-secreting cells Involved in lymphocyte and monocyte differentiation. It induces myeloma and plasmacytoma growth and induces nerve cells differentiation Acts on B-cells, T-cells, hepatocytes, hematopoeitic progenitor cells and cells of the CNS. Also acts as a myokine. It is discharged into the bloodstream after muscle contraction and acts to increase the breakdown of fats and to improve insulin resistance.

Involvement in disease

Genetic variations in IL6 are associated with susceptibility to rheumatoid arthritis systemic juvenile (RASJ) [MIM:604302]. An inflammatory articular disorder with systemic-onset beginning before the age of 16. It represents a subgroup of juvenile arthritis associated with severe extraarticular features and occasionally fatal complications. During active phases of the disorder, patients display a typical daily spiking fever, an evanescent macular rash, lymphadenopathy, hepatosplenomegaly, serositis, myalgia and arthritis.
Note=A IL6 promoter polymorphism is associated with a lifetime risk of development of Kaposi sarcoma in HIV-infected men.

Sequence similarities

Belongs to the IL-6 superfamily.

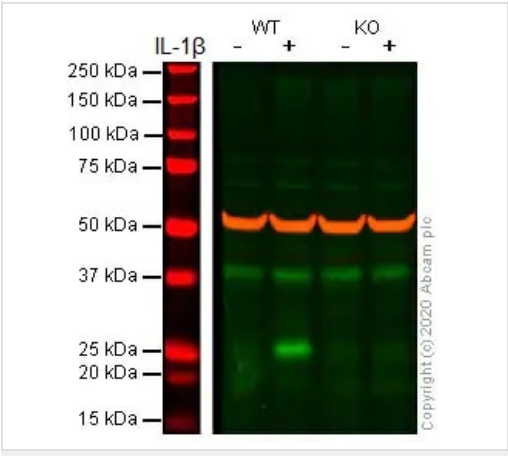
Post-translational modifications

N- and O-glycosylated.

Cellular localization

Secreted.

Images



Western blot - Anti-IL-6 antibody [EPR21711] - BSA and Azide free (ab233707)

All lanes : Anti-IL-6 antibody [EPR21711] (ab233706) at 1/1000 dilution

Lane 1 : Wild-type A549 Brefeldin A (ab120299)-treated (5ug/ml, 4h) cell lysate
Lane 2 : Wild-type A549 IL-1ß (ab259387) (20 ng/ml, 24h) and Brefeldin A (ab120299)-treated (5 ug/ml for the last 4h) cell lysate
Lane 3 : IL-6 knockout A549 Brefeldin A (ab120299)-treated (5ug/ml, 4h) cell lysate
Lane 4 : IL-6 knockout A549 IL-1ß (ab259387) (20 ng/ml, 24h) and Brefeldin A (ab120299)-treated (5 ug/ml for the last 4h) cell lysate

Lysates/proteins at 30 µg per lane.

Performed under reducing conditions.

Predicted band size: 23 kDa

Observed band size: 25 kDa

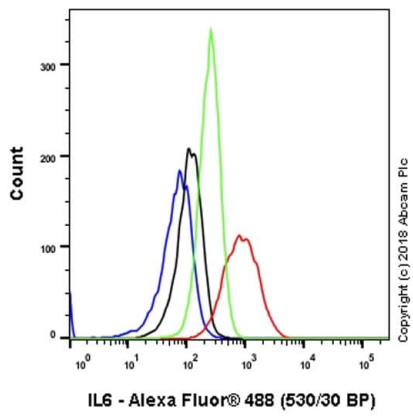
why is the actual band size different from the predicted?

Additional bands at: 40 kDa (possible non-specific binding)

This data was developed using the same antibody clone in a different buffer formulation (ab233706).

Lanes 1 - 4: Merged signal (red and green). Green - ab233706 observed at 25 kDa. Red - loading control ab7291 (Mouse anti-Alpha Tubulin [DM1A] observed at 55kDa.

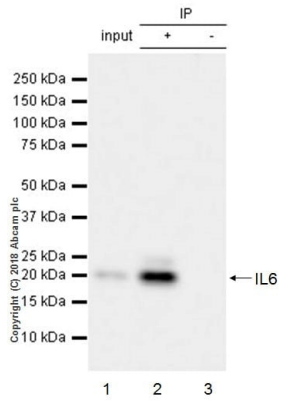
ab233706 was shown to react with IL-6 in wild-type A549 cells in western blot with loss of signal observed in IL-6 knockout sample. Wild-type A549 and IL-6 knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in fluorescent western blot (TBS-based) blocking solution before incubation with ab233706 and ab7291 (Mouse anti-Alpha Tubulin [DM1A] overnight at 4°C at a 1 in 1000 Dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Flow Cytometry - Anti-IL-6 antibody [EPR21711] - BSA and Azide free (ab233707)

Flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized HUVEC (human umbilical vein endothelial cell line) treated with lipopolysaccharide (0.5 µg/ml) for 24h and Brefeldin A (300 ng/ml) for 20h (red) / untreated control (green) cells labeling IL6 with ab233706 at 1/500 compared with a Rabbit monoclonal IgG (ab172730) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077), at 1/2000 dilution was used as the secondary antibody.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab233706).



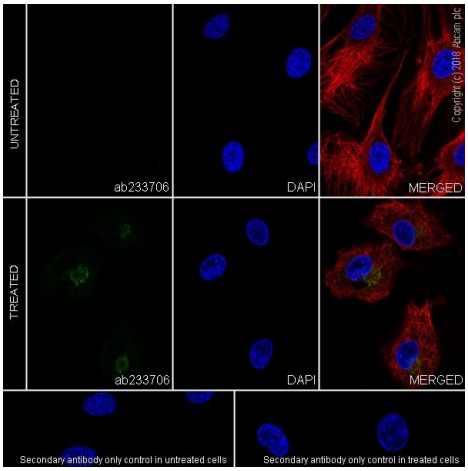
Immunoprecipitation - Anti-IL-6 antibody [EPR21711] - BSA and Azide free (ab233707)

IL6 was immunoprecipitated from 0.35 mg HUVEC (human umbilical vein endothelial cell line) treated with lipopolysaccharide (0.5 µg/ml) for 24h and Brefeldin A (300 ng/ml) for 20h, whole cell lysate with ab233706 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab233706 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10000 dilution.

Lane 1: HUVEC treated with lipopolysaccharide (0.5 µg/ml) for 24h and Brefeldin A (300 ng/ml) for 20h, whole cell lysate 10 µg (Input).
Lane 2: ab233706 IP in HUVEC treated with lipopolysaccharide (0.5 µg/ml) for 24h and Brefeldin A (300 ng/ml) for 20h, whole cell lysate.
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab233706 in HUVEC treated with lipopolysaccharide (0.5 µg/ml) for 24h and Brefeldin A (300 ng/ml) for 20h, whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.
Exposure time: 5 seconds.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab233706).



Immunocytochemistry/ Immunofluorescence - Anti-IL-6 antibody [EPR21711] - BSA and Azide free (ab233707)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HUVEC (human umbilical vein endothelial cell line) cells labeling IL6 with ab233706 at 1/50 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining in HUVEC cells treated with lipopolysaccharide (0.5 µg/ml) for 24h and Brefeldin A (300 ng/ml) for 20h. The nuclear counterstain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) at 1/200 dilution (red).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab233706).

Anti-IL-6 antibody [EPR21711] - BSA and Azide free

(ab233707)

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

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