abcam

Product datasheet

Anti-Integrin alpha 2 antibody [EPR17338] - C-terminal ab181548

KO VALIDATED Recombinant RabMAb

4 Abreviews 22 References 14 Images

Overview

Product name	Anti-Integrin alpha 2 antibody [EPR17338] - C-terminal
Description	Rabbit monoclonal [EPR17338] to Integrin alpha 2 - C-terminal
Host species	Rabbit
Tested applications	**Suitable for:** ICC/IF, IP, IHC-P, WB, Flow Cyt (Intra)
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: A549, A431, 293T,T-47D, C6 and NIH/3T3 whole cell lysates, human fetal brain and fetal heart, mouse heart and kidney, and rat spleen tissue lysates. IHC-P: Human colon, human squamous cell carcinoma of cervix, mouse kidney and rat colon tissues. ICC/IF: Wild-type HAP1, PC-3 and MCF7 cells. Flow Cyt (intra): A549 cells. IP: T-47D whole cell extract.
General notes	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**.

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	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal

Clone number	EPR17338
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab181548 in the following tested applications.

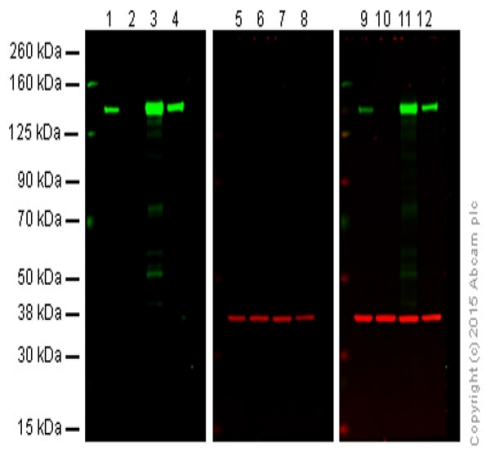
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		Use a concentration of 1 µg/ml. This product gave a positive signal in wild-type HAP1 cells fixed with 4% formaldehyde (10 min) and 100% methanol (5 min).
IP		1/150.
IHC-P	★★★★★ (2)	1/500. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
WB		1/5000. Detects a band of approximately 150 kDa (predicted molecular weight: 129 kDa).
Flow Cyt (Intra)		1/160. **ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target

Function	Integrin alpha-2/beta-1 is a receptor for laminin, collagen, collagen C-propeptides, fibronectin and E-cadherin. It recognizes the proline-hydroxylated sequence G-F-P-G-E-R in collagen. It is responsible for adhesion of platelets and other cells to collagens, modulation of collagen and collagenase gene expression, force generation and organization of newly synthesized extracellular matrix.
Sequence similarities	Belongs to the integrin alpha chain family. Contains 7 FG-GAP repeats. Contains 1 VWFA domain.
Domain	The integrin I-domain (insert) is a VWFA domain. Integrins with I-domains do not undergo protease cleavage.
Cellular localization	Membrane.

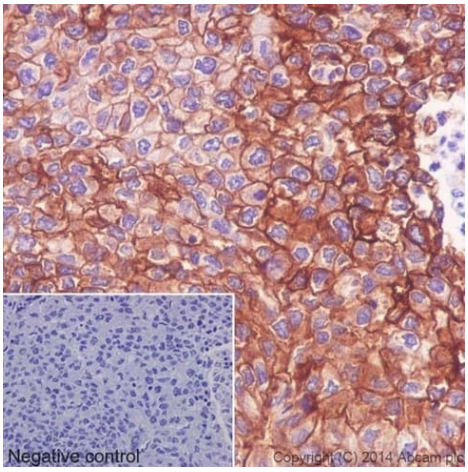
Images



Western blot - Anti-Integrin alpha 2 antibody [EPR17338] - C-terminal (ab181548)

Lanes 1, 5 and 9: Wild-type HAP1 cell lysate (20 µg)
Lanes 2, 6 and 10: Integrin alpha 2 knockout HAP1 cell lysate (20 µg)
Lanes 3, 7 and 11: A431 cell lysate (20 µg)
Lanes 4, 8 and 12: T47D cell lysate (20 µg)
Lanes 1, 2, 3 and 4: Green signal from target - ab181548 observed at 150 kDa
Lanes 5, 6, 7 and 8: Red signal from loading control - **ab8245** observed at 37 kDa
Lanes 9, 10, 11 and 12: Merged (red and green) signal

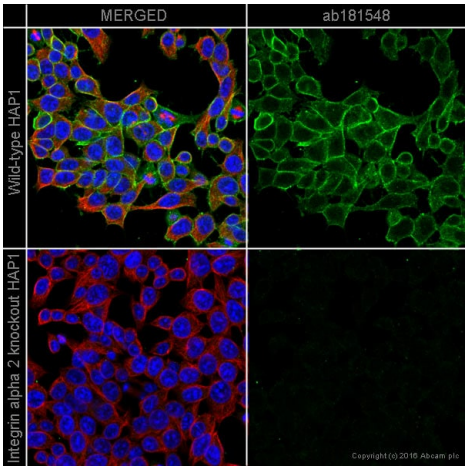
ab181548 was shown to specifically react with Integrin alpha 2 when Integrin alpha 2 knockout samples were used. Wild-type and Integrin alpha 2 knockout samples were subjected to SDS-PAGE. ab181548 and **ab8245** (loading control to GAPDH) were diluted 1/5000 and 1/2000 respectively and incubated overnight at 4°C. 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 1/10 000 dilution for 1 h at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Integrin alpha 2 antibody [EPR17338] - C-terminal (ab181548)

Immunohistochemical analysis of paraffin-embedded Human squamous cell carcinoma of cervix tissue labeling Integrin alpha 2 with ab181548 at 1/500 dilution followed by Goat **Anti-Rabbit HRP** (IgG H&L) (**ab97051**) at 1/500 dilution. Membrane and weak cytoplasmic staining on epithelial cells of human squamous cell carcinoma of cervix tissue is observed. Counter stained with Hematoxylin.
Negative control: Used PBS instead of primary antibody.

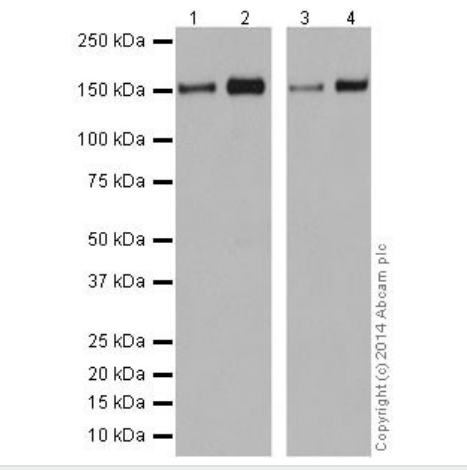
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-Integrin alpha 2 antibody [EPR17338] - C-terminal (ab181548)

ab181548 staining Integrin α2 in wild-type HAP1 cells (top panel) and Integrin α2 knockout HAP1 cells (bottom panel). The cells were fixed with 100% methanol (5min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab181548 at 1µg/ml concentration and **ab7291** at 1ug/ml concentration overnight at +4°C, followed by a further incubation at room temperature for 1h with a goat secondary antibody to Rabbit IgG (Alexa Fluor® 488) (**ab150081**) at 2 µg/ml (shown in green) and a goat secondary antibody to Mouse IgG (Alexa Fluor® 594) (**ab150120**) at 2ug/ml (shown in pseudo-color red). Nuclear DNA was labelled in blue with DAPI.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



Western blot - Anti-Integrin alpha 2 antibody [EPR17338] - C-terminal (ab181548)

All lanes : Anti-Integrin alpha 2 antibody [EPR17338] - C-terminal (ab181548) at 1/20000 dilution

Lane 1 : A549 (Human lung carcinoma) whole cell lysates
Lane 2 : A431 (Human epidermoid carcinoma) whole cell lysates
Lane 3 : 293T (Human epithelial cells from embryonic kidney) whole cell lysates
Lane 4 : T-47D (Human ductal breast epithelial tumor cell line) whole cell lysates

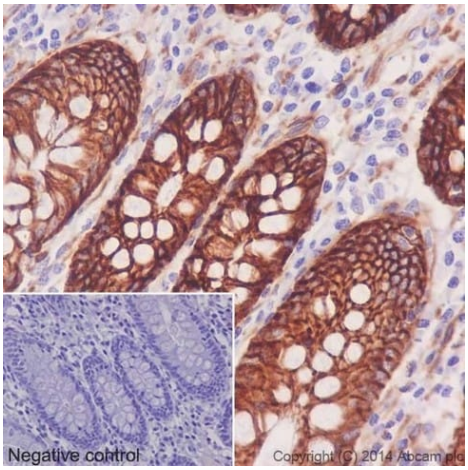
Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugated at 1/1000 dilution

Predicted band size: 129 kDa
Observed band size: 150 kDa

Blocking and diluting buffer 5% NFDM/TBST.

The increased molecular mass observed is due to glycosylation.

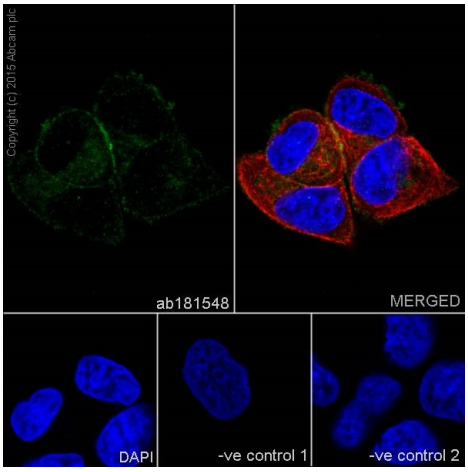


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Integrin alpha 2 antibody [EPR17338] - C-terminal (ab181548)

Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling Integrin alpha 2 with ab181548 at 1/500 dilution followed by Goat **Anti-Rabbit HRP** (IgG H&L) (**ab97051**) at 1/500 dilution. Membrane and weak cytoplasmic staining on epithelial cells of human colon is observed. Counter stained with Hematoxylin.

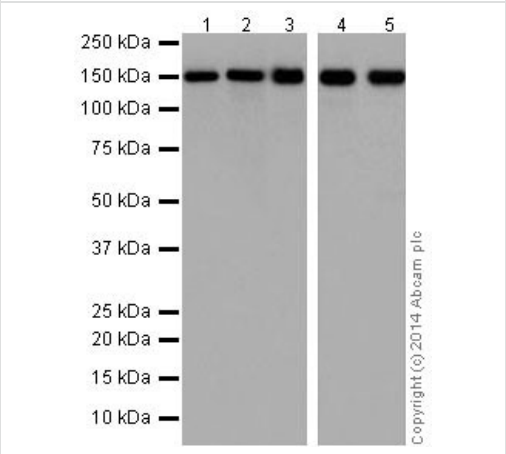
Negative control: Used PBS instead of primary antibody.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-Integrin alpha 2 antibody [EPR17338] - C-terminal (ab181548)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized MCF7 (Human breast adenocarcinoma cell line) cells labeling integrin alpha 2 with ab181548 at 1/100 dilution, followed by Goat anti-rabbit IAlexa Fluor® 488 (IgG) (**ab150077**) secondary antibody at 1/400 dilution (green). Confocal image showing membrane staining on MCF7 cell line is observed. The nuclear counterstain is DAPI (blue). Tubulin is detected with **ab7291** (anti-Tubulin mouse mAb) at 1/500 dilution and **ab150120** (goat anti-mouse AlexaFluor®594 secondary antibody) at 1/500 dilution (red).
The negative controls are as follows:-
-ve control 1 - ab181548 at 1/100 dilution followed by **ab150120** (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution.
-ve control 2. - **ab7291** (anti-Tubulin mouse mAb) at 1/500 dilution followed by **ab150077** (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/400 dilution.



Western blot - Anti-Integrin alpha 2 antibody [EPR17338] - C-terminal (ab181548)

All lanes : Anti-Integrin alpha 2 antibody [EPR17338] - C-terminal (ab181548) at 1/5000 dilution

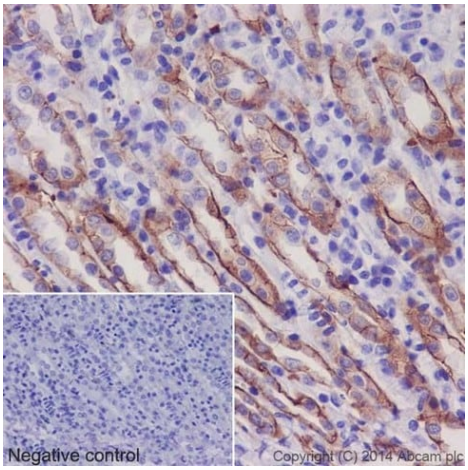
Lane 1 : Mouse heart tissue lysate
Lane 2 : Mouse kidney tissue lysate
Lane 3 : Rat spleen tissue lysate
Lane 4 : C6 (Rat glial tumor cells) whole cell lysate
Lane 5 : NIH/3T3 (Mouse embyro fibroblast cells) whole cell lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugated at 1/1000 dilution

Predicted band size: 129 kDa
Observed band size: 150 kDa

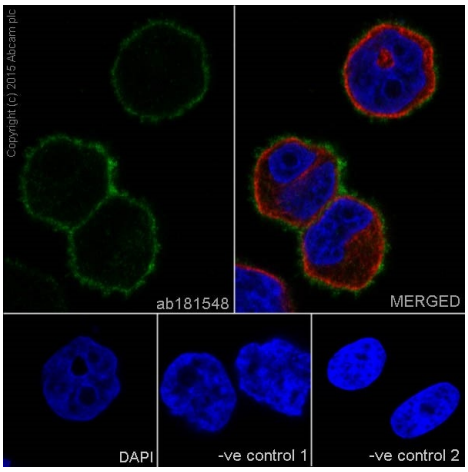
Blocking and diluting buffer 5% NFDM/TBST.
The increased molecular mass observed is due to glycosylation.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Integrin alpha 2 antibody [EPR17338] - C-terminal (ab181548)

Immunohistochemical analysis of paraffin-embedded Mouse kidney tissue labeling Integrin alpha 2 with ab181548 at 1/500 dilution followed by Goat **Anti-Rabbit HRP** (IgG H&L) (**ab97051**) at 1/500 dilution. Membrane and weak cytoplasmic staining on epithelial cells of Mouse kidney tubule is observed. Counter stained with Hematoxylin.
Negative control: Used PBS instead of primary antibody.

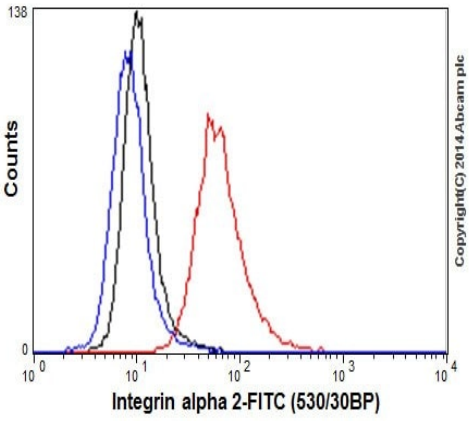
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-Integrin alpha 2 antibody [EPR17338] - C-terminal (ab181548)

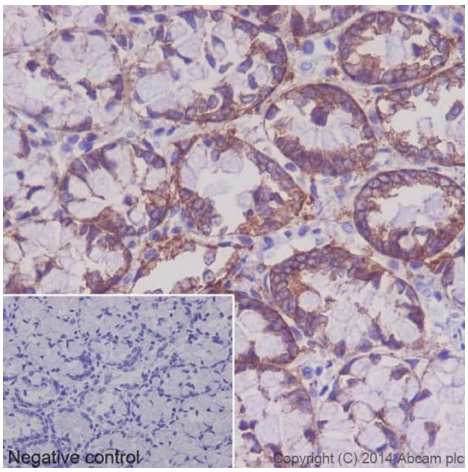
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized PC-3 (Human prostate adenocarcinoma cell line) cells labeling integrin alpha 2 with ab181548 at 1/100 dilution, followed by Goat anti-rabbit IAlexa Fluor® 488 (IgG) (**ab150077**) secondary antibody at 1/400 dilution (green). Confocal image showing membrane and weakly cytoplasmic staining on PC-3 cell line is observed. The nuclear counterstain is DAPI (blue). Tubulin is detected with **ab7291** (anti-Tubulin mouse mAb) at 1/500 dilution and **ab150120** (goat anti-mouse AlexaFluor®594 secondary antibody) at 1/500 dilution (red).

The negative controls are as follows:-
-ve control 1 - ab181548 at 1/100 dilution followed by **ab150120** (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution.
-ve control 2. - **ab7291** (anti-Tubulin mouse mAb) at 1/500 dilution followed by **ab150077** (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/400 dilution.



Flow Cytometry (Intracellular) - Anti-Integrin alpha 2 antibody [EPR17338] - C-terminal (ab181548)

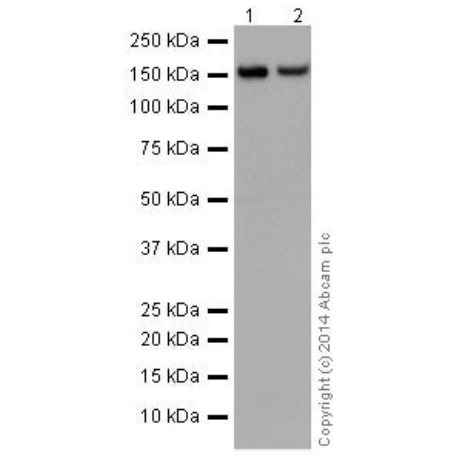
Intracellular flow cytometric analysis of 2% paraformaldehyde-fixed A549 (Human lung carcinoma) cells labeling integrin alpha 2 with **ab181549** at 1/160 dilution (red) compared with a rabbit monoclonal IgG isotype control (black) and a unlabelled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (FITC) at 1/150 dilution was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Integrin alpha 2 antibody [EPR17338] - C-terminal (ab181548)

Immunohistochemical analysis of paraffin-embedded Rat colon tissue labeling Integrin alpha 2 with ab181548 at 1/500 dilution followed by Goat **Anti-Rabbit HRP** (IgG H&L) (**ab97051**) at 1/500 dilution. Membrane staining on epithelial cells of Rat colon tissue is observed. Counter stained with Hematoxylin.
Negative control: Used PBS instead of primary antibody.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-Integrin alpha 2 antibody [EPR17338] - C-terminal (ab181548)

All lanes : Anti-Integrin alpha 2 antibody [EPR17338] - C-terminal (ab181548) at 1/5000 dilution

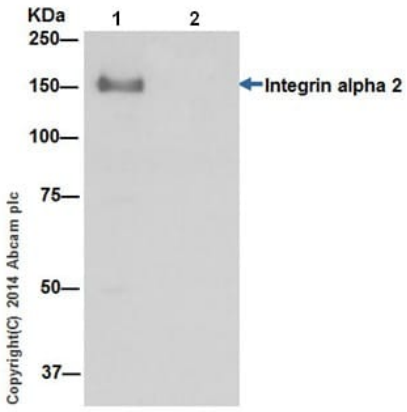
Lane 1 : Human fetal brain whole cell lysates
Lane 2 : Human fetal heart whole cell lysates

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 129 kDa
Observed band size: 150 kDa

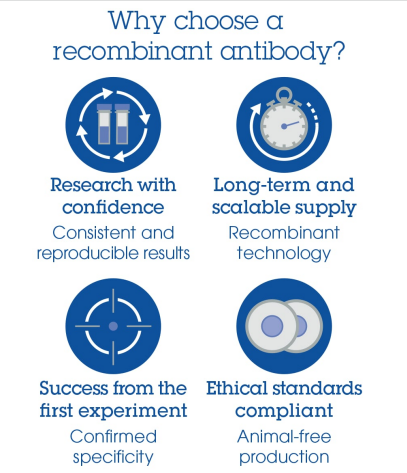
Blocking and diluting buffer 5% NFDM/TBST.
The increased molecular mass observed is due to glycosylation.



Immunoprecipitation - Anti-Integrin alpha 2 antibody [EPR17338] - C-terminal (ab181548)

Integrin alpha 2 was immunoprecipitated from 1mg of T-47D (Human ductal breast epithelial tumor cell line) whole cell extract with ab181548 at 1/150 dilution. Western blot was performed using ab181548 at 1/20,000 dilution. Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG, was used as secondary antibody at 1/1500 dilution. Lane 1: T-47D whole cell extract Lane 2: PBS instead of T-47D whole cell extract.

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



Anti-Integrin alpha 2 antibody [EPR17338] - C-terminal (ab181548)

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors