abcam

ab278106

Anti-Axl antibody [EPR23892-15] - BSA and Azide free

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR23892-15
Purification technique	Affinity purification Protein A
Concentration	1.008 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	-

Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information AXL

Function

Receptor tyrosine kinase that transduces signals from the extracellular matrix into the cytoplasm by binding growth factor GAS6 and which is thus regulating many physiological processes including cell survival, cell proliferation, migration and differentiation. Ligand binding at the cell surface induces dimerization and autophosphorylation of AXL. Following activation by ligand, AXL binds and induces tyrosine phosphorylation of PI3-kinase subunits PIK3R1, PIK3R2 and PIK3R3; but also GRB2, PLCG1, LCK and PTPN11. Other downstream substrate candidates for AXL are CBL, NCK2, SOCS1 and TNS2. Recruitment of GRB2 and phosphatidylinositol 3 kinase regulatory subunits by AXL leads to the downstream activation of the AKT kinase. GAS6/AXL signaling plays a role in various processes such as endothelial cell survival during acidification by preventing apoptosis, optimal cytokine signaling during human natural killer cell development, hepatic regeneration, gonadotropin-releasing hormone neuron survival and migration, platelet activation, or regulation of thrombotic responses. Also plays an important role in inhibition of Toll-like receptors (TLRs)-mediated innate immune response. (Microbial infection) Acts as a receptor for lassa virus and lymphocytic choriomeningitis virus, possibly through GAS6 binding to phosphatidyl-serine at the surface of virion envelope. (Microbial infection) Acts as a receptor for Ebolavirus, possibly through GAS6 binding to phosphatidyl-serine at the surface of virion envelope. (Microbial infection) Promotes Zika virus entry in glial cells, Sertoli cells and astrocytes (PubMed:28076778, PubMed:29379210, PubMed:31311882). Additionally, Zika virus potentiates AXL kinase activity to antagonize type I interferon signaling and thereby promotes infection (PubMed:28076778). Interferon signaling inhibition occurs via an SOCS1-dependent mechanism (PubMed:29379210).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

ab278106 is the carrier-free version of ab259831.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?

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 batch production

For more information, read more on recombinant antibodies.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

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.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The Axl protein also known as AXL receptor tyrosine kinase plays a significant role in cell signaling. It has a molecular weight of approximately 98 kDa. Axl is a transmembrane receptor that is expressed in a variety of tissues including the immune system reproductive organs and the central nervous system. It is mainly recognized for transmitting signals from the extracellular matrix into the cytoplasm by binding with its ligand Gas6.

Biological function summary	Axl is important in mediating cell survival proliferation and migration. It functions as part of the TAM family of receptors which also includes Tyro3 and Mer. Axl often forms complexes with these receptors to facilitate efficient signaling. This interaction triggers phosphorylation events that activate downstream signaling proteins reinforcing its influence in cellular functions.
Pathways	Axl is deeply involved in the PI3K-Akt and MAPK signaling pathways which are central to cellular growth and survival. In these pathways Axl interacts closely with proteins like PI3K and Akt to regulate processes such as apoptosis and metabolism. Its interaction with these pathways places Axl as an important modulator of intracellular signaling cascades.
Associated diseases and disorders	Axl has been implicated in cancer progression and immune response dysregulation. In many cancer types Axl overexpression links to tumor invasion metastasis and resistance to therapy. Moreover Axl's role in autoimmune diseases becomes evident through its association with the Gas6 protein. Exploring these connections furthers understanding of how Axl's aberrant activity influences health and disease.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

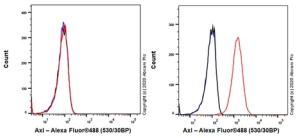
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

8 product images



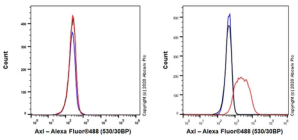
Flow Cytometry - Anti-Axl antibody [EPR23892-15] - BSA and Azide free (ab278106)

Axl Flow Cytometry staining using rabbit Anti-Axl antibody

This data was developed using ab259831, the same antibody clone in a different buffer formulation.
Flow cytometric analysis of Parental HeLa (human cervix adenocarcinoma epithelial cell (Right panel)/ AXL knockout HeLa cells (Left panel) cells labelling Axl with ab259831 at 1/500 dilution (0.1µg) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled 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.

Positive staining on HeLa cells (ab255928), while no staining on AXL knockout HeLa cells (ab261810).

Gated on viable cells.



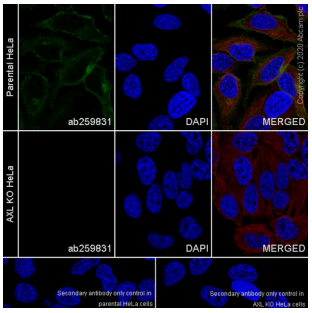
Flow Cytometry - Anti-Axl antibody [EPR23892-15] - BSA and Azide free (ab278106)

Axl Flow Cytometry staining using rabbit Anti-Axl antibody

This data was developed using ab259831, the same antibody clone in a different buffer formulation.
Flow cytometric analysis of Jurkat (Human T cell leukemia T lymphocyte, Left panel)/ NCI-H1299 (human lung carcinoma epithelial cell, Right panel) cells labelling Axl with ab259831 at 1/500 dilution (0.1µg) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled 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.

Negative control: Jurkat (PMID: 28423548).

Gated on viable cells.

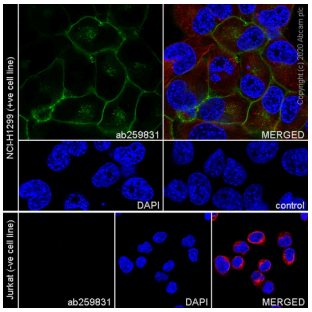


Immunocytochemistry/ Immunofluorescence - Anti-Axl antibody [EPR23892-15] - BSA and Azide free (ab278106)

Axl Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Axl antibody

This data was developed using ab259831, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized Axl KO HeLa (ab261810) cells labelling Axl with ab259831 at 1/100 (4.9 µg/ml) dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing strong membranous and weak cytoplasmic staining in parental HeLa cells (ab255928), while no staining in AXL knockout HeLa cells (ab261810). ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.



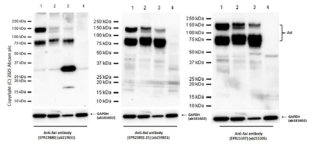
Immunocytochemistry/ Immunofluorescence - Anti-Axl antibody [EPR23892-15] - BSA and Azide free (ab278106)

Axl Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Axl antibody

This data was developed using ab259831, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Trito nX-100 permeabilized NCI-H1299 cells labelling Axl with ab259831 at 1/500 (0.98 µg/ml) dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing strong membranous and weak cytoplasmic staining in NCI-H1299 cells (PMID: 27443522). ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The nuclear counterstain was DAPI (Blue).

Negative control: Jurkat (PMID: 28423548).

Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.



Western blot - Anti-Axl antibody [EPR23892-15] - BSA and Azide free (ab278106)

This data was developed using ab259831, the same antibody clone in a different buffer formulation.

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

ab219651 exhibits low sensitivity in western blot. It is recommended to use ab259831 or ab215205 as alternatives or to optimize experimental conditions by increasing the sample loading amount, using a lower antibody dilution ratio, and employing femtogram-level sensitivity substrates.

Lanes 1 - 3:
Western blot - Anti-Axl antibody [EPR19880] (ab219651) at 1/1000 dilution

Lanes 5 - 7:
Western blot - Anti-Axl antibody [EPR23892-15] (ab259831) at 1/1000 dilution

Lanes 9 - 11:
Western blot - Anti-Axl antibody [EPR21107] (ab215205) at 1/1000 dilution

Lanes 1, 5 and 9:
HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate 20 µg

Lanes 2, 6 and 9:
HUVEC (human umbilical vein endothelial cell line) whole cell lysate 20 µg

Lanes 3, 7 and 11:
A549 (Human lung carcinoma epithelial cell) whole cell lysate 20 µg

Lanes 4, 8 and 12:
Jurkat (human T cell leukemia cell line from peripheral blood) whole cell lysate at 20 µg

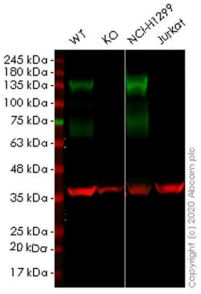
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 98 kDa

Observed band size: 80 kDa, 140 kDa

Exposure time: 180s



Western blot - Anti-Axl antibody [EPR23892-15] - BSA and Azide free (ab278106)

Axl Western blot staining using rabbit Anti-Axl antibody

This data was developed using ab259831, the same antibody clone in a different buffer formulation.
Blocking and diluting buffer and concentration: Intercept® (TBS) Blocking Buffer diluted with an equal volume of 0.1% TBS

Lanes 1-4: Merged signal (red and green). Green - ab259831 observed at 140, 80 kDa. Red - loading control ab8245 observed at 36 kDa.

ab259831 Anti-Axl antibody [EPR23892-15] was shown to react with Axl in Hela cells in Western blot. Loss of signal was observed when knockout cell line ab261810 (knockout cell lysate ab257151) was used. Wild-type and Axl knockout samples were subjected to SDS-PAGE.

ab259831 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) were incubated at 4°C overnight 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.

Observed band size are 140,80 kDa. The 80 kDa band is the soluble Axl (PMID: 7822279)
Negative control: Jurkat (PMID: 28423548).

All lanes:
Western blot - Anti-Axl antibody [EPR23892-15] (ab259831) at 1/1000 dilution

Lane 1:
Wild-type HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 40 µg

Lane 2:
Axl knockout HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 40 µg

Lane 2:
Western blot - Human AXL knockout HeLa cell line (ab261810)

Lane 3:
NCI-H1299 (human lung carcinoma epithelial cell) whole cell lysate at 40 µg

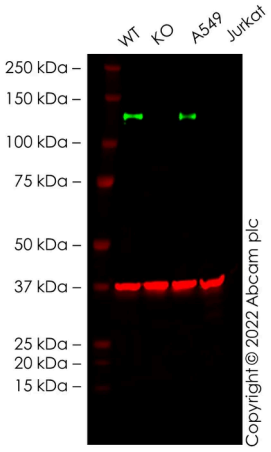
Lane 4:
Jurkat (human T cell leukemia T lymphocyte), whole cell lysate at 40 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG H&L (IRDye® 800CW) (ab216773) and Goat Anti-Mouse IgG H&L (IRDye® 680RD) (ab216776) at 1/10000 dilution

Predicted band size: 98 kDa

Observed band size: 140 kDa, 80 kDa



Western blot - Anti-Axl antibody [EPR23892-15] - BSA and Azide free (ab278106)

This data was developed using ab259831, the same antibody clone in a different buffer formulation. False colour image of Western blot: Anti-Axl antibody [EPR23892-15] staining at 1/1000 dilution, shown in green; Mouse anti-GAPDH antibody [6C5] (ab8245) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab259831 was shown to bind specifically to Axl. A band was observed at 135 kDa in wild-type A549 cell lysates with no signal observed at this size in AXL knockout cell line ab273744 (knockout cell lysate ab273780). To generate this image, wild-type and AXL knockout A549 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 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution. Observed band size are 140,80 kDa. The 80 kDa band is the soluble Axl (PMID: 7822279)
All lanes:
Western blot - Anti-Axl antibody [EPR23892-15] (ab259831) at 1/1000 dilution

Lane 1:
Wild-type A549 cell lysate at 20 µg

Lane 2:
AXL knockout A549 cell lysate at 20 µg

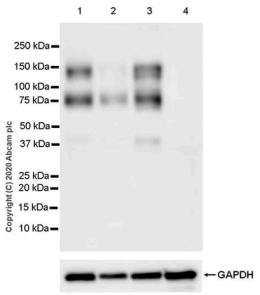
Lane 3:
A549 cell lysate at 20 µg

Lane 4:
Jurkat cell lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 98 kDa

Observed band size: 135 kDa



Western blot - Anti-Axl antibody [EPR23892-15] - BSA and Azide free (ab278106)

Axl Western blot staining using rabbit Anti-Axl antibody

This data was developed using ab259831, the same antibody clone in a different buffer formulation.
Blocking and diluting buffer and concentration: 5% NFDM/TBST

Negative control: Jurkat (PMID: 28423548).

Exposure time: 37 seconds

All lanes:
Western blot - Anti-Axl antibody [EPR23892-15] (ab259831) at 1/1000 dilution

Lane 1:
HeLa (human cervix adenocarcinoma epithelial cell), whole cell lysate at 20 µg

Lane 2:
DU145 (human prostate carcinoma epithelial cell), whole cell lysate at 20 µg

Lane 3:
NCI-H1299 (human lung carcinoma epithelial cell), whole cell lysate at 20 µg

Lane 4:
Jurkat (human T cell leukemia T lymphocyte), whole cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/20000 dilution

Predicted band size: 98 kDa

Observed band size: 140 kDa, 80 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.