abcam

ab314126

Anti-Gentamicin antibody [EPR27991-65]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR27991-65
Purification technique	Affinity purification Protein A
Concentration	0.509 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Chemical
Dilution info	1/1000
Notes	-

Dot

Tested

Species	Chemical
Dilution info	1/1000
Notes	-

IHC-P

Tested

Species	Chemical
Dilution info	1/500
Notes	-

ICC/IF

Tested

Species	Chemical
Dilution info	1/100
Notes	-

Flow Cyt (Intra)

Tested

Species	Chemical
Dilution info	1/500
Notes	-

IP

Tested

Species	Chemical
Dilution info	1/30
Notes	-

cELISA

Tested

Species	Chemical
Dilution info	20 ng/mL
Notes	-

Target data

See full target information Gentamicin

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

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.

Supplementary info

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

Activity summary	Gentamicin is not a typical biological target but rather an aminoglycoside antibiotic used in targeting bacteria. It does not possess a protein structure with a mass as it is a compound. Gentamicin acts mechanically by binding to the 30S subunit of bacterial ribosomes causing a misreading of mRNA and disrupting protein synthesis. It mainly targets gram-negative bacteria but also shows activity against some gram-positive bacteria. Gentamicin is typically administered in settings like hospitals for treating severe infections.
Biological function summary	The main activity of this antibiotic disrupts the normal function of the bacterial ribosome. It is not a part of a complex but interacts with the ribosome complex consisting of ribosomal RNA and various ribosomal proteins. By binding to the 30S subunit gentamicin causes errors in the translation process preventing the bacteria from synthesizing necessary proteins needed for growth and proliferation.
Pathways	Disruptions caused by gentamicin impact the bacterial translation pathway significantly. It affects the elongation cycle of protein synthesis where aminoacyl-tRNA enters the ribosomal A site. The faulty incorporation of amino acids due to gentamicin's effect hinders the elongation pathway leading to nonfunctional proteins and bacterial death. This process relates components like other aminoglycoside antibiotics such as amikacin which function similarly.
Associated diseases and disorders	Severe bacterial infections often require gentamicin intervention. It is particularly relevant in treating infections caused by Pseudomonas aeruginosa and those leading to conditions such as sepsis and complicated urinary tract infections. Proteins involved in bacterial virulence and resistance such as efflux pumps are associated with how certain bacteria may resist gentamicin action impacting its effectiveness in these diseases.

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

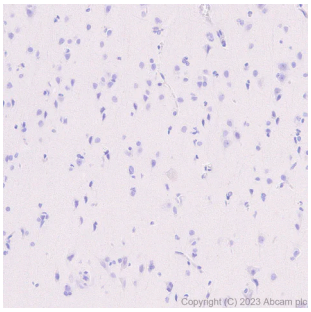
We do not recommend this combination. It is not covered by our product promise.

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.

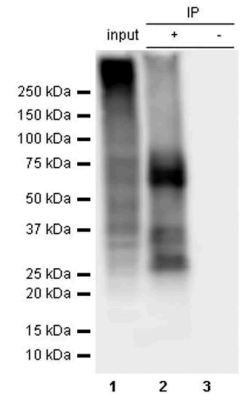
8 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Gentamicin antibody [EPR27991-65] (ab314126)

Gentamicin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human cerebrum using rabbit Anti-Gentamicin antibody

Immunohistochemical analysis of paraffin-embedded Human cerebrum tissue labeling Gentamicin with ab314126 at 1/500 (1.018 µg/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Negative control: No staining on human cerebrum. The section was incubated with ab314126 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Immunoprecipitation - Anti-Gentamicin antibody [EPR27991-65] (ab314126)

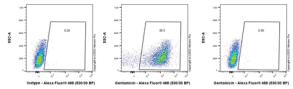
Gentamicin was immunoprecipitated from 0.35 mg RAW264.7 treated with 0.5mg/mL Gentamicin-crosslink-BSA for 4 hours whole cell lysate with ab314126 at 1/30 dilution (2µg in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab314126 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution. Lane 1: RAW264.7 treated with 0.5mg/mL Gentamicin-crosslink-BSA for 4 hours whole cell lysate Lane 2: ab314126 IP in RAW264.7 treated with 0.5mg/mL Gentamicin-crosslink-BSA for 4 hours whole cell lysate Lane 3:Rabbit monoclonal IgG (ab172730) instead of ab314126 in RAW264.7 treated with 0.5 mg/mL Gentamicin-crosslink-BSA for 4 hours whole cell lysate. Blocking and dilution buffer and concentration: 5% NFDM/TBST. Exposure time: 3 seconds
All lanes:
Immunoprecipitation - Anti-Gentamicin antibody [EPR27991-65] (ab314126) at 1/30 dilution

All lanes:
RAW264.7 treated with 0.5mg/mL Gentamicin-crosslink-BSA for 4 hours whole cell lysate

Secondary

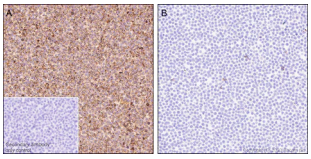
All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 3s



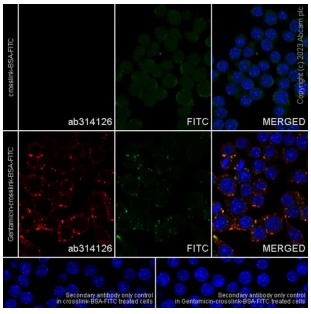
Flow Cytometry (Intracellular) - Anti-Gentamicin antibody [EPR27991-65] (ab314126)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Isotype (Left) / RAW 264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage) treated with 0.5 mg/ml Gentamicin-crosslink-BSA-FITC for 4 hours for 4h (Middle) / RAW 264.7 treated with 0.5 mg/ml crosslink-BSA-FITC for 4h (Right) cells labelling Gentamicin with ab314126 at 1/500 dilution (0.1 ug)/ Middle and Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



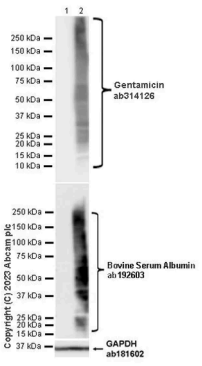
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Gentamicin antibody [EPR27991-65] (ab314126)

Immunohistochemical analysis of paraffin-embedded RAW 264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage) labeling Gentamicin with ab314126 at 1/500 (1.018 µg/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Panel A. Positive staining on RAW 264.7 treated with 0.5 mg/mL Gentamicin-crosslink-BSA-FITC for 4h; Panel B. Negligible staining on untreated RAW 264.7. The section was incubated with ab314126 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Immunocytochemistry/ Immunofluorescence - Anti-Gentamicin antibody [EPR27991-65] (ab314126)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized RAW 264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage) cells labelling Gentamicin with ab314126 at 1/100 (5.09 µg/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 (2 µg/ml) dilution (Red). Confocal image showing positive staining in RAW 264.7 cells treated with 0.5mg/mL Gentamicin-crosslink-BSA-FITC for 4 hours, and no staining when 0.5 mg/mL crosslink-BSA-FITC was incubated for 4 hours. Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 µg/ml) dilution.



Western blot - Anti-Gentamicin antibody [EPR27991-65] (ab314126)

Blocking and diluting buffer and concentration: 5% NFDM/TBST In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution. In Western blot, Anti-Bovine Serum Albumin antibody [EPR12774] (ab192603) staining at 1/1000 dilution. Exposure time: 3 seconds
All lanes:
Western blot - Anti-Gentamicin antibody [EPR27991-65] (ab314126) at 1/1000 dilution

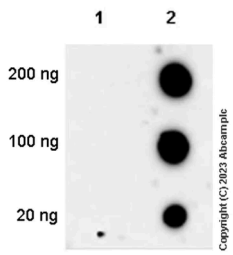
Lane 1:
Untreated RAW264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage) whole cell lysate at 20 µg

Lane 2:
RAW264.7 treated with 0.5mg/mL Gentamicin-crosslink-BSA for 4 hours whole cell lysate at 20 µg

Secondary

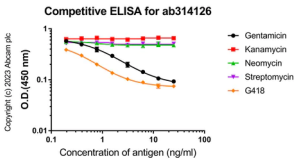
All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Exposure time: 3s



Dot Blot - Anti-Gentamicin antibody [EPR27991-65] (ab314126)

Dot blot analysis of Gentamicin using ab314126 at 1:1000 (0.509 ug/ml) followed by a Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1:100,000 dilution. Exposure time: 180 seconds. Blocking and diluting buffer and concentration: 5% NFDM/TBST



Competitive ELISA - Anti-Gentamicin antibody [EPR27991-65] (ab314126)

Indirect ELISA analysis of ab314126 at 20 ng/ml. The Secondary antibody used was Streptavidin-Horseradish Peroxidase at 1: 20000 dilution. Antigen: Gentamicin. Antigen concentration: 0-25 ng/ml

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