abcam

ab290741

Anti-VAMP4 antibody [EPR25066-77] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR25066-77
Purification technique	Affinity purification Protein A

Reactivity data

ICC/IF

Tested

Species	Mouse
Dilution info	-
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Human
Dilution info	-
Notes	-

IP

Tested

Species	Mouse, Human
Dilution info	-
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

IHC-Fr

Tested

Species	Mouse, Rat
Dilution info	-
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse, Human
Dilution info	-
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information VAMP4

Function	Involved in the pathway that functions to remove an inhibitor (probably synaptotagmin-4) of calcium-triggered exocytosis during the maturation of secretory granules. May be a marker for this sorting pathway that is critical for remodeling the secretory response of granule.

Storage

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

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.

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	Vesicle-associated membrane protein 4 (VAMP4) mechanically participates in cellular processes linked to vesicle transport and fusion. Known alternatively as synaptobrevin-4 VAMP4 has a molecular mass of approximately 15 kDa. It localizes within the trans-Golgi network and endosomal compartments. VAMP4 associates with membranes during the trafficking of proteins and plays a significant role in regulating the fusion of vesicles with specific intracellular compartments.
Biological function summary	VAMP4 functions in mediating intracellular transport and fusion events and it is part of the SNARE complex. This complex facilitates the precise docking and fusion of vesicles a necessary process for maintaining cellular homeostasis. By partnering with other SNARE proteins VAMP4 controls the release and sorting of vesicular contents which is important for normal cell functions. Its action ensures that vesicles deliver their cargo to the correct location within the cell.
Pathways	The role of VAMP4 integrates into the broader network of intracellular trafficking pathways. It is especially significant in the Golgi-endosomal transport pathway and plays a coordinating role with other SNARE proteins like syntaxin and SNAP-23. Its interactions ensure vesicles reach their intended destinations within these pathways aiding in effective transport and fusion across cellular compartments.
Associated diseases and disorders	VAMP4 connects with several neuropathological conditions such as Alzheimer's disease and Parkinson's disease. Alterations in VAMP4 expression or function can disturb vesicular transport and fusion contributing to the accumulation of misfolded proteins. Such imbalances often result in neuronal dysfunction. VAMP4 also interacts with proteins like alpha-synuclein which further links it to neurodegenerative disease pathways where improper vesicle traffic plays a significant role.

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

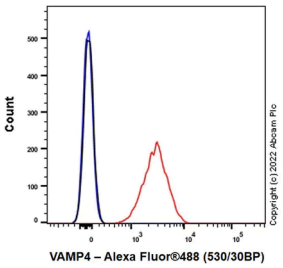
We do not recommend this combination. It is not covered by our product promise.

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.

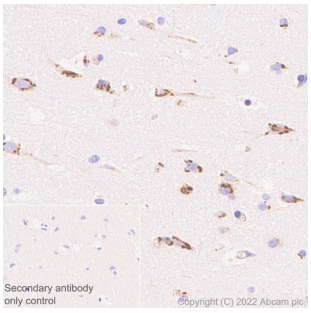
18 product images



Flow Cytometry (Intracellular) - Anti-VAMP4 antibody [EPR25066-77] - BSA and Azide free (ab290741)

VAMP4 Flow Cytometry (Intracellular) staining using rabbit Anti-VAMP4 antibody

This data was developed using ab290726, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized 293T (Human embryonic kidney epithelial cell) cells labelling VAMP4 with ab290726 at 1/50 dilution (1ug) (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). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody.



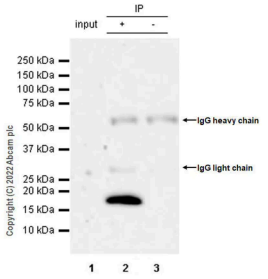
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-VAMP4 antibody [EPR25066-77] - BSA and Azide free (ab290741)

VAMP4 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-VAMP4 antibody

This data was developed using ab290726, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human cerebrum tissue labelling VAMP4 with ab290726 at 1/500 (1.102 ug/ml) followed by a ready to use LeicaDS9800 (BOND™ Polymer Refine Detection). Cytoplasmic staining on human cerebrum.The section was incubated with ab290726 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) was used.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins



Immunoprecipitation - Anti-VAMP4 antibody [EPR25066-77] - BSA and Azide free (ab290741)

This data was developed using ab290726, the same antibody clone in a different buffer formulation.
VAMP4 was immunoprecipitated from 0.35 mg 293T (human embryonic kidney epithelial cell) whole cell lysate 10 ug with ab290726 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab290726 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.

Lane 1: 293T (human embryonic kidney epithelial cell) whole cell lysate 10 ug

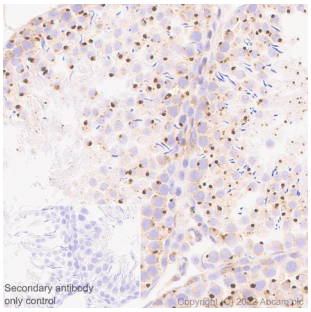
Lane 2: ab290726 IP in 293T whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab290726 in 293T whole cell lysate

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

Exposure time: 93 seconds
All lanes:
Immunoprecipitation - Anti-VAMP4 antibody [EPR25066-77] (ab290726)

Predicted band size: 16 kDa



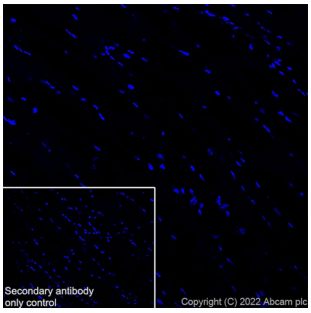
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-VAMP4 antibody [EPR25066-77] - BSA and Azide free (ab290741)

VAMP4 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-VAMP4 antibody

This data was developed using ab290726, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Rat testis tissue labelling VAMP4 with ab290726 at 1/500 (1.102 ug/ml) followed by a ready to use LeicaDS9800 (BOND™ Polymer Refine Detection). Cytoplasmic staining on rat testis. The section was incubated with ab290726 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 with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins

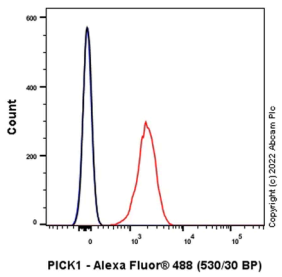


Immunohistochemistry (Frozen sections) - Anti-VAMP4 antibody [EPR25066-77] - BSA and Azide free (ab290741)

VAMP4 Immunohistochemistry (Frozen sections) staining using rabbit Anti-VAMP4 antibody

This data was developed using ab290726, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Mouse skeletal muscle (fresh) tissue labeling VAMP4 with ab290726 at 1/500 (1.102 ug/ml) dilution followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 µg/mL) dilution (Green). Negative control (PMID:10359608) No staining on mouse skeletal muscle is observed. The nuclear counterstain was DAPI (Blue).

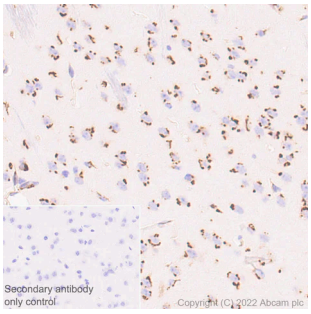
Secondary antibody control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 µg/mL) dilution.



Flow Cytometry (Intracellular) - Anti-VAMP4 antibody [EPR25066-77] - BSA and Azide free (ab290741)

VAMP4 Flow Cytometry (Intracellular) staining using rabbit Anti-VAMP4 antibody

This data was developed using ab290726, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized RAW 264.7 (Mouse Abelson murine leukemia virus-induced tumor macrophage) cells labelling VAMP4 with ab290726 at 1/50 dilution (1ug) (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). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-VAMP4 antibody [EPR25066-77] - BSA and Azide free (ab290741)

VAMP4 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-VAMP4 antibody

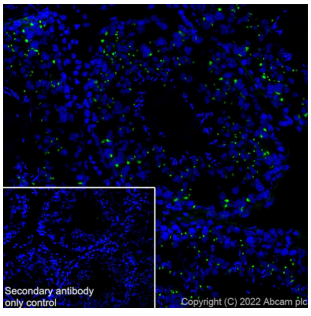
This data was developed using ab290726, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Mouse cerebrum tissue labelling VAMP4 with ab290726 at 1/500 (1.102 ug/ml) followed by a ready to use LeicaDS9800 (BOND™ Polymer Refine Detection). Cytoplasmic staining on mouse cerebrum (PMID: 16506193). The section was incubated with ab290726 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) was used.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins

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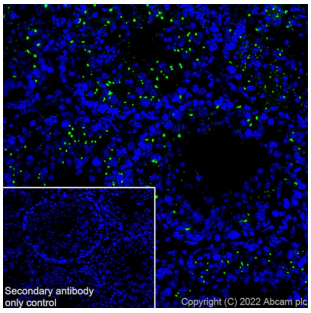


Immunohistochemistry (Frozen sections) - Anti-VAMP4 antibody [EPR25066-77] - BSA and Azide free (ab290741)

VAMP4 Immunohistochemistry (Frozen sections) staining using rabbit Anti-VAMP4 antibody

This data was developed using ab290726, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Rat testis (fresh) tissue labeling VAMP4 with ab290726 at 1/500 (1.102 ug/ml) dilution followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 µg/mL) dilution (Green). Positive staining on rat testis is observed. The nuclear counterstain was DAPI (Blue).

Secondary antibody control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 µg/mL) dilution.

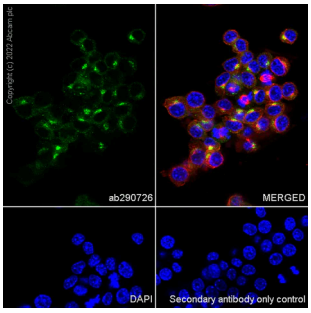


Immunohistochemistry (Frozen sections) - Anti-VAMP4 antibody [EPR25066-77] - BSA and Azide free (ab290741)

VAMP4 Immunohistochemistry (Frozen sections) staining using rabbit Anti-VAMP4 antibody

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Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Mouse testis (fresh) tissue labeling VAMP4 with ab290726 at 1/500 (1.102 ug/ml) dilution followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 µg/mL) dilution (Green). Positive staining on mouse testis is observed. The nuclear counterstain was DAPI (Blue).

Secondary antibody control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 µg/mL) dilution.

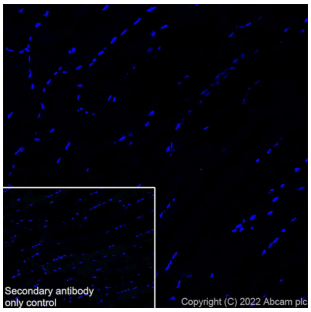


Immunocytochemistry/ Immunofluorescence - Anti-VAMP4 antibody [EPR25066-77] - BSA and Azide free (ab290741)

VAMP4 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-VAMP4 antibody

This data was developed using ab290726, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeilized RAW 264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage) cells lebelling VAMP4 with ab290726 at 1/50 (11.02 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 (2 ug/ml) dilution (Green). Confocal image showing cytoplasmic staining in RAW 264.7 cell line is observed. ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 (2.5 ug/ml) dilution (Red). 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 ug/ml) dilution.

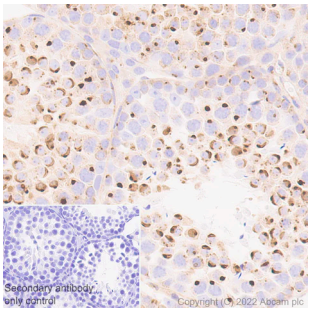


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VAMP4 Immunohistochemistry (Frozen sections) staining using rabbit Anti-VAMP4 antibody

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Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Rat skeletal muscle (fresh) tissue labeling VAMP4 with ab290726 at 1/500 (1.102 ug/ml) dilution followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 µg/mL) dilution (Green). Negative control (PMID:10359608). No staining on rat skeletal muscle is observed. The nuclear counterstain was DAPI (Blue).

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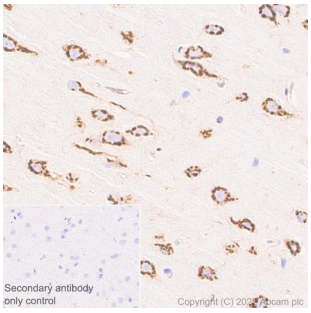
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VAMP4 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-VAMP4 antibody

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Immunohistochemical analysis of paraffin-embedded Mouse testis tissue labelling VAMP4 with ab290726 at 1/500 (1.102 ug/ml) followed by a ready to use LeicaDS9800 (BOND™ Polymer Refine Detection). Cytoplasmic staining on mouse testis. The section was incubated with ab290726 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

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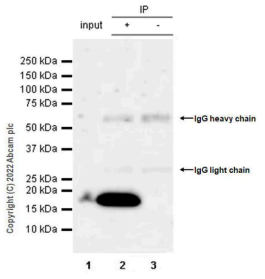
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VAMP4 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-VAMP4 antibody

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Immunohistochemical analysis of paraffin-embedded Rat cerebrum tissue labelling VAMP4 with ab290726 at 1/500 (1.102 ug/ml) followed by a ready to use LeicaDS9800 (BOND™ Polymer Refine Detection) was used. Cytoplasmic staining on rat cerebrum. The section was incubated with ab290726 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

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VAMP4 was immunoprecipitated from 0.35 mg RAW264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage) whole cell lysate 10 ug with ab290726 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab290726 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.

Lane 1: RAW264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage) whole cell lysate 10 ug

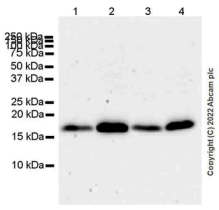
Lane 2: ab290726 IP in RAW264.7 whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab290726 in RAW264.7 whole cell lysate

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

Exposure time: 93 seconds
All lanes:
Immunoprecipitation - Anti-VAMP4 antibody [EPR25066-77] (ab290726)

Predicted band size: 16 kDa



Western blot - Anti-VAMP4 antibody [EPR25066-77] - BSA and Azide free (ab290741)

VAMP4 Western blot staining using rabbit Anti-VAMP4 antibody

This data was developed using ab290726, the same antibody clone in a different buffer formulation.
Blocking / Dilution buffer and concentration: 5% NFDM/TBST

The expression profile/molecular weight observed is consistent with that described in the literature (PMID: 10359608).

All lanes:
Western blot - Anti-VAMP4 antibody [EPR25066-77] (ab290726) at 1/1000 dilution

Lane 1:
Jurkat (human T cell leukemia T lymphocyte) whole cell lysate. at 40 µg

Lane 2:
K-562 (human chronic myelogenous leukemia lymphoblast) whole cell lysate at 40 µg

Lane 3:
293T (human embryonic kidney epithelial cell) whole cell lysate. at 40 µg

Lane 4:
HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate. at 40 µg

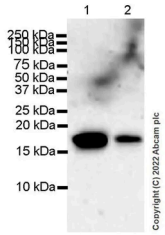
Secondary

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

Predicted band size: 16 kDa

Observed band size: 18 kDa

Exposure time: 3min



Western blot - Anti-VAMP4 antibody [EPR25066-77] - BSA and Azide free (ab290741)

VAMP4 Western blot staining using rabbit Anti-VAMP4 antibody

This data was developed using ab290726, the same antibody clone in a different buffer formulation.
Blocking / Dilution buffer and concentration: 5% NFDM/TBST

The expression profile/molecular weight observed is consistent with that described in the literature (PMID: 10359608).

All lanes:
Western blot - Anti-VAMP4 antibody [EPR25066-77] (ab290726) at 1/1000 dilution

Lane 1:
SH-SY5Y (human neuroblastoma epithelial cell) whole cell lysate. at 20 µg

Lane 2:
Human testis tissue lysate. at 20 µg

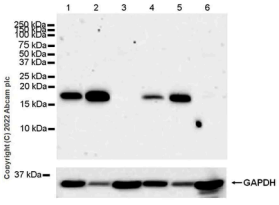
Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 16 kDa

Observed band size: 18 kDa

Exposure time: 3min



Western blot - Anti-VAMP4 antibody [EPR25066-77] - BSA and Azide free (ab290741)

VAMP4 Western blot staining using rabbit Anti-VAMP4 antibody

This data was developed using ab290726, the same antibody clone in a different buffer formulation.
Blocking / Dilution buffer and concentration: 5% NFDM/TBST

The expression profile/molecular weight observed is consistent with that described in the literature (PMID: 10359608).
Negative control: skeletal muscle (PMID: 10359608)

All lanes:
Western blot - Anti-VAMP4 antibody [EPR25066-77] (ab290726) at 1/1000 dilution

Lane 1:
Mouse brain tissue lysate. at 20 µg

Lane 2:
Mouse testis tissue lysate. at 20 µg

Lane 3:
Mouse skeletal muscle tissue lysate. at 20 µg

Lane 4:
Rat brain tissue lysate. at 20 µg

Lane 5:
Rat testis tissue lysate. at 20 µg

Lane 6:
Rat skeletal muscle tissue lysate. at 20 µg

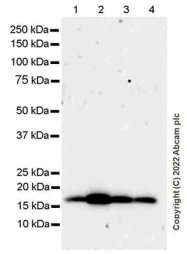
Secondary

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

Predicted band size: 16 kDa

Observed band size: 18 kDa

Exposure time: 3min



Western blot - Anti-VAMP4 antibody [EPR25066-77] - BSA and Azide free (ab290741)

VAMP4 Western blot staining using rabbit Anti-VAMP4 antibody

This data was developed using ab290726, the same antibody clone in a different buffer formulation.
Blocking / Dilution buffer and concentration: 5% NFDM/TBST

The expression profile/molecular weight observed is consistent with that described in the literature (PMID: 10359608).

All lanes:
Western blot - Anti-VAMP4 antibody [EPR25066-77] (ab290726) at 1/1000 dilution

Lane 1:
C6 (rat glial tumor glial cell) whole cell lysate. at 20 µg

Lane 2:
RAW264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage) whole cell lysate. at 20 µg

Lane 3:
PC-12 (rat adrenal gland pheochromocytoma) whole cell lysate. at 20 µg

Lane 4:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate. at 20 µg

Secondary

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

Predicted band size: 16 kDa

Observed band size: 18 kDa

Exposure time: 3min

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