abcam

ab275028

Anti-Chromogranin C/SGII antibody [EPR23876-52] - BSA and Azide free

Recombinant | RabMAb | Advanced Validation

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	EPR23876-52
Purification technique	Affinity purification Protein A
Concentration	1.02 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Mouse, Rat, Human
Dilution info	-

Notes	-

ICC/IF

Tested

Species	Mouse, Rat
Dilution info	-
Notes	-

Expected

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

IP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

mIHC

Tested

Species	Mouse
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Expected

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

WB

Tested

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

IHC-Fr

Tested

Species	Mouse
Dilution info	-
Notes	Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

Species	Rat
Dilution info	-
Notes	Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

Expected

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

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	-
Notes	-

Expected

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

Target data

See full target information SCG2

Function	Neuroendocrine protein of the granin family that regulates the biogenesis of secretory granules.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab275028 is the carrier-free version of ab275019.

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	Chromogranin C also known as secretogranin II (SGII) is a member of the granin family and weighs approximately 68 kDa. This protein is mainly located within the dense core secretory granules of endocrine and neuronal cells. It plays a mechanical role in the storage and release of peptide hormones and neurotransmitters. Chromogranin C is found in various regions of the brain adrenal medulla and in the pituitary gland reflecting its involvement in the neuroendocrine system.
Biological function summary	This protein functions in the regulation of peptide hormone secretion and is part of a complex with other granin proteins such as Chromogranin A. It modulates the granule's environment by affecting the pH and ionic composition which influences the storage and release of hormones and neurotransmitters. Chromogranin C participates in the production of biologically active peptides after proteolytic processing playing roles in the modulation of endocrine and neuronal activities.
Pathways	Chromogranin C connects to the neuroendocrine signaling pathways and regulated secretory pathway. Within these pathways it interacts with other proteins such as the prohormone convertases and furin which handle peptide precursors' cleavage into active hormones and neurotransmitters. This procession is important for maintaining cellular communication and response mechanisms linking Chromogranin C to cellular signaling and biochemical processes that control physiological homeostasis and stress responses.
Associated diseases and disorders	Chromogranin C correlates with neurodegenerative diseases like Alzheimer's disease and psychiatric disorders such as depression. These connections arise through its relationship with amyloid precursor protein in Alzheimer's and alterations in serotonergic systems in depression. The expression levels and processing of Chromogranin C may serve as a biomarker for these diseases highlighting its potential role in the pathogenesis and progression of neuro-psychiatric conditions.

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.

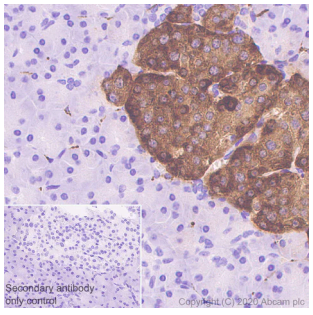
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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13 product images



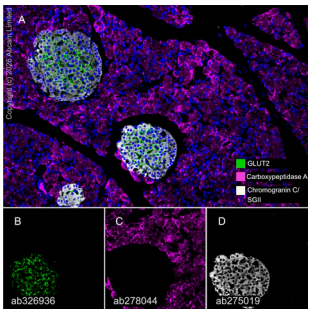
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Chromogranin C/SGII antibody [EPR23876-52] - BSA and Azide free (ab275028)

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

This data was developed using ab275019, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human pancreas tissue labeling Chromogranin C/SGII with ab275019 at 1/2000 (0.267 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Cytoplasmic staining in human pancreatic islet (PMID: 30690892)The section was incubated with ab275019 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 Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

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



Multiplex immunohistochemistry - Anti-Chromogranin C/SGII antibody [EPR23876-52] - BSA and Azide free (ab275028)

Chromogranin C/SGII Multiplex immunohistochemistry staining of Rat pancreas using rabbit Anti-Chromogranin C/SGII antibody

This data was developed using ab275019, the same antibody clone in a different buffer formulation.
Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded rat pancreas tissue staining GLUT2 with ab326936 at a 1/500 dilution (0.972 µg/ml), ab278044 anti-Carboxypeptidase A at a 1/4000 dilution (0.135 µg/ml) and ab275019 anti-Chromogranin C/SGII at a 1/500 dilution (0.972 µg/ml).

Panel A: merged staining of anti-GLUT2 (green; Opal™570), anti-Carboxypeptidase A (magenta; Opal™520) and anti-Chromogranin C/SGII (gray; Opal™690) on mouse pancreas.

Panel B: anti-GLUT2 staining membrane of islet cells in rat pancreas.

Panel C: anti-Carboxypeptidase A staining acinar cells in rat pancreas.

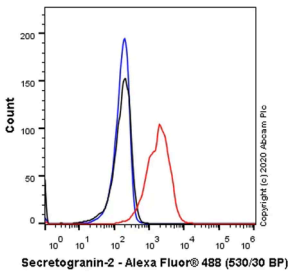
Panel D: anti-Chromogranin C/SGII staining islet cells in rat pancreas.

Nuclear DNA was labeled with DAPI (shown in blue).

The section was incubated in three rounds of staining: in the order of ab326936, ab278044 and ab275019 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit using Opal Polymer HRP Ms + Rb secondary reagent. Image acquisition was performed with a Leica STELLARIS confocal microscope.

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.

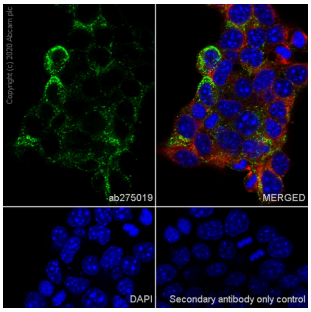


Flow Cytometry (Intracellular) - Anti-Chromogranin C/SGII antibody [EPR23876-52] - BSA and Azide free (ab275028)

Chromogranin C/SGII Flow Cytometry (Intracellular) staining using rabbit Anti-Chromogranin C/SGII antibody

This data was developed using ab275019, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of 4% paraformaldehyde fixed, 90% methanol permeabilized PC-12 (Rat adrenal gland pheochromocytoma) cells labelling Chromogranin C/SGII with ab275019 at 1/500 dilution (0.1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) isotype control (Black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

A Goat anti rabbit IgG (Alexa Fluor®488, ab150077) at 1/2000 dilution was used as the secondary antibody.

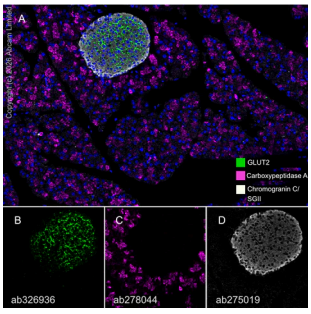


Immunocytochemistry/ Immunofluorescence - Anti-Chromogranin C/SGII antibody [EPR23876-52] - BSA and Azide free (ab275028)

Chromogranin C/SGII Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Chromogranin C/SGII antibody

This data was developed using ab275019, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized Beta-TC-6 cells labelling Chromogranin C/SGII with ab275019 at 1/50 (10.68 ug/ml) dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing cytoplasmic staining in Beta-TC-6 cell line. 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.



Multiplex immunohistochemistry - Anti-Chromogranin C/SGII antibody [EPR23876-52] - BSA and Azide free (ab275028)

Chromogranin C/SGII Multiplex immunohistochemistry staining of Mouse pancreas using rabbit Anti-Chromogranin C/SGII antibody

This data was developed using ab275019, the same antibody clone in a different buffer formulation.
Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded mouse pancreas tissue staining GLUT2 with ab326936 at a 1/500 dilution (0.972 µg/ml), ab278044 anti-Carboxypeptidase A at a 1/4000 dilution (0.135 µg/ml) and ab275019 anti-Chromogranin C/SGII at a 1/500 dilution (0.972 µg/ml).

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Panel B: anti-GLUT2 staining membrane of islet cells in mouse pancreas.

Panel C: anti-Carboxypeptidase A staining acinar cells in mouse pancreas.

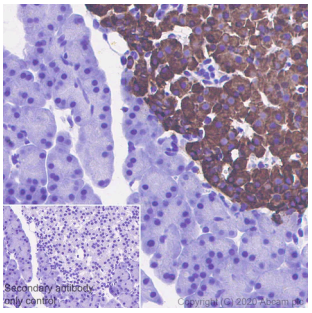
Panel D: anti-Chromogranin C/SGII staining islet cells in mouse pancreas.

Nuclear DNA was labeled with DAPI (shown in blue).

The section was incubated in three rounds of staining: in the order of ab326936, ab278044 and ab275019 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit using Opal Polymer HRP Ms + Rb secondary reagent. Image acquisition was performed with a Leica STELLARIS confocal microscope.

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



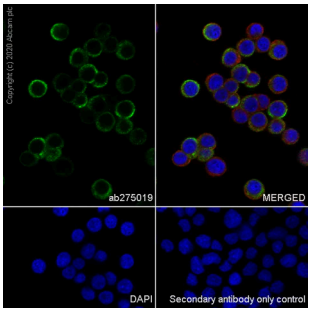
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Chromogranin C/SGII antibody [EPR23876-52] - BSA and Azide free (ab275028)

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

This data was developed using ab275019, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Rat pancreas tissue labeling Chromogranin C/SGII with ab275019 at 1/2000 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Cytoplasmic staining in pancreatic islet (PMID: 30690892). The section was incubated with ab275019 for 10 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 Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins.

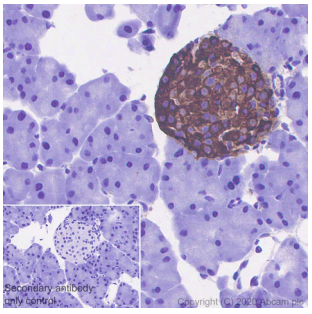


Immunocytochemistry/ Immunofluorescence - Anti-Chromogranin C/SGII antibody [EPR23876-52] - BSA and Azide free (ab275028)

Chromogranin C/SGII Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Chromogranin C/SGII antibody

This data was developed using ab275019, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 100% methanol-fixed PC-12 cells labelling Chromogranin C/SGII with ab275019 at 1/50 (10.68 ug/ml) dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing cytoplasmic staining in PC-12 cell line. is observed. 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.



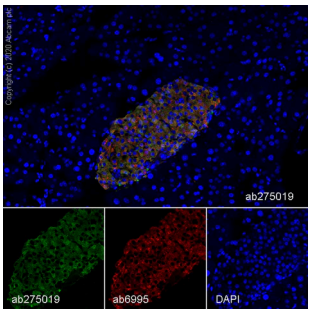
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Chromogranin C/SGII antibody [EPR23876-52] - BSA and Azide free (ab275028)

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Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins.

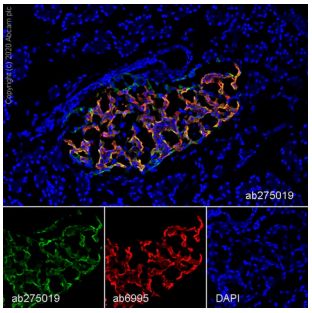


Immunohistochemistry (Frozen sections) - Anti-Chromogranin C/SGII antibody [EPR23876-52] - BSA and Azide free (ab275028)

Chromogranin C/SGII Immunohistochemistry (Frozen sections) staining using rabbit Anti-Chromogranin C/SGII antibody

This data was developed using ab275019, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Mouse pancreas tissue labeling Chromogranin C/SGII with ab275019 at 1/500 (1.068 ug/ml) dilution followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution (Green). Positive staining on mouse pancreatic islet is observed. Insulin was counterstained using ab6995 at 1/1000 dilution, followed by ab150120 Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) at 1/1000 dilution (Red).The nuclear counterstain was DAPI (Blue).

Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).



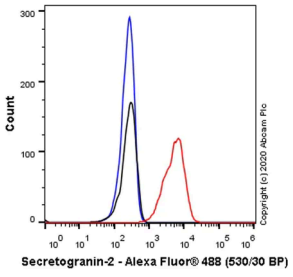
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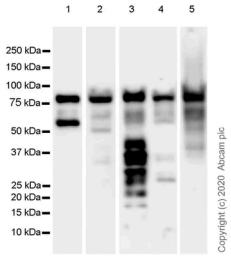
Flow Cytometry (Intracellular) - Anti-Chromogranin C/SGII antibody [EPR23876-52] - BSA and Azide free (ab275028)

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Intracellular flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Beta-TC-6 (Mouse pancreas insulinoma beta cell) cells labelling Chromogranin C/SGII with ab275019 at 1/500 dilution (0.1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) isotype control (Black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.



Western blot - Anti-Chromogranin C/SGII antibody [EPR23876-52] - BSA and Azide free (ab275028)

Chromogranin C/SGII Western blot staining using rabbit Anti-Chromogranin C/SGII antibody

This data was developed using ab275019, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-Chromogranin C/SGII antibody [EPR23876-52] (ab275019) at 1/1000 dilution

Lane 1:
SH-SY5Y (human neuroblastoma epithelial cell) whole cell lysate at 40 µg

Lane 2:
Neuro-2a (mouse neuroblastoma neuroblast) whole cell lysate at 40 µg

Lane 3:
Beta-TC-6 (mouse pancreas insulinoma beta cell) whole cell lysate at 40 µg

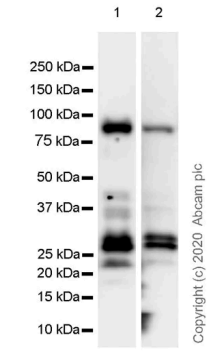
Lane 4:
GH3 (rat pituitary epithelial) whole cell lysate at 40 µg

Lane 5:
PC-12 (rat adrenal gland pheochromocytoma) whole cell lysate at 40 µg

Secondary

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

Predicted band size: 71 kDa



Western blot - Anti-Chromogranin C/SGII antibody [EPR23876-52] - BSA and Azide free (ab275028)

Chromogranin C/SGII Western blot staining using rabbit Anti-Chromogranin C/SGII antibody

This data was developed using ab275019, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

Exposure times: Lane 1: 26 seconds; Lane 2: 48 seconds.

Chromogranin C/SGII is proteolytically processed to small fragments. 81-kDa, 22 to 48 kDa forms are observed. The molecular weight observed is consistent with what has been described in the literature (PMID: 2282535, 8492910, 16357044, 7883050).

All lanes:

Western blot - Anti-Chromogranin C/SGII antibody [EPR23876-52] (ab275019) at 1/1000 dilution

Lane 1:
Mouse hypothalamus tissue lysate at 40 µg

Lane 2:
Rat hypothalamus tissue lysate at 40 µg

Secondary

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

Predicted band size: 71 kDa

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