abcam

ab255284

Anti-Chromogranin A antibody [EPR22537-248] - 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	EPR22537-248
Purification technique	Affinity purification Protein A
Concentration	1.027 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Mouse, Rat
Dilution info	-

Notes	-

WB

Expected

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

ICC/IF

Tested

Species	Mouse
Dilution info	-
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
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).

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.

Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	-
Notes	-

Expected

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

IHC-P

Tested

Species	Rat
Dilution info	-
Notes	-

Expected

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

Target data

See full target information Chromogranin-A

Function	Pancreastatin. Strongly inhibits glucose induced insulin release from the pancreas. Catestatin. Inhibits catecholamine release from chromaffin cells and noradrenergic neurons by acting as a non-competitive nicotinic cholinergic antagonist. Can induce mast cell migration, degranulation and production of cytokines and

chemokines. Serpinin. Regulates granule biogenesis in endocrine cells by up-regulating the transcription of protease nexin 1 (SERPINE2) via a cAMP-PKA-SP1 pathway. This leads to inhibition of granule protein degradation in the Golgi complex which in turn promotes granule formation (PubMed:21436258). Pyroglutaminated (pGlu)-serpinin exerts an antiapoptotic effect on cells exposed to oxidative stress (PubMed:21537909).

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

ab255284 is the carrier-free version of ab254322.

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 A (CgA) sometimes called chromagranin A is a glycoprotein with a molecular weight of approximately 49–52 kDa. It is highly expressed in the secretory granules of neuroendocrine cells present in tissues such as the adrenal medulla pancreas and endocrine cells of the gastrointestinal tract. CgA identified as part of a family including chromogranin B and chromogranin C functions mechanically as a precursor to various bioactive peptides. This translates into its involvement in the storage and release of hormones and peptides within vesicles.

Biological function summary	Chromogranin A assists in the regulation of secretory pathways across multiple neuroendocrine systems. It plays a role in hormone storage conversion to active peptides and regulates the exocytosis of hormones. CgA acts within a complex contributing to secretory granule biogenesis and influencing intravesicular acidity. As a regulatory component the exact physiological roles are diverse impacting cardiovascular metabolic and immunological processes.
Pathways	Chromogranin A is involved in pathways such as the catecholamine synthesis and release pathway and the serotonergic pathway. Within these pathways it interacts with proteins like secretogranin II and parathyroid hormone (PTH). These interactions modulate neurotransmitter storage and secretion across various systems. CgA's bioactive peptides also contribute to modulating physiological processes like vasoconstriction and insulin regulation linking it closely with these signaling cascades.
Associated diseases and disorders	Chromogranin A is a known marker for neuroendocrine tumors where its levels in blood may increase due to tumor activity. It links to diseases like pheochromocytoma and carcinoid tumors where improper regulation of CgA-associated pathways occurs. Additionally its connection to parathyroid disorders through the PTH pathway illustrates its broader implication in endocrine pathophysiology. CgA serves as an invaluable diagnostic and prognostic tool in these disease states and supports the development of targeted therapies.

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

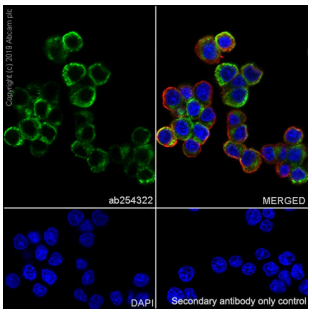
We do not recommend this combination. It is not covered by our product promise.

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.

7 product images

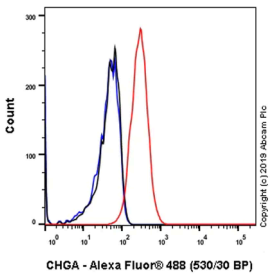


Immunocytochemistry/ Immunofluorescence - Anti-Chromogranin A antibody [EPR22537-248] - BSA and Azide free (ab255284)

Chromogranin A Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Chromogranin A antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized PC-12 (rat adrenal gland pheochromocytoma cell line) cells labeling Chromogranin A with ab254322 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing membranous and cytoplasmic staining in PC-12 cell line. The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) at 1/200 dilution (red).
Secondary antibody only control: Used PBS instead of primary antibody, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab254322).

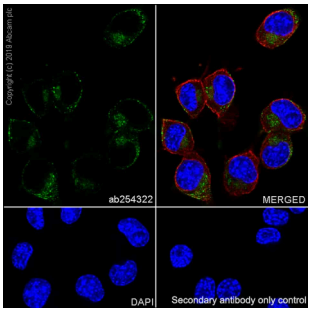


Flow Cytometry (Intracellular) - Anti-Chromogranin A antibody [EPR22537-248] - BSA and Azide free (ab255284)

Chromogranin A Flow Cytometry (Intracellular) staining using rabbit Anti-Chromogranin A antibody

Intracellular flow cytometric analysis of4% paraformaldehyde-fixed, 90% methanol-permeabilized Neuro-2a (mouse neuroblastoma cell line) cells labeling Chromogranin A with ab254322 at 1/60 (red) compared with Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (blue).
Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077), at 1/2000 dilution was used as the secondary antibody.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab254322).



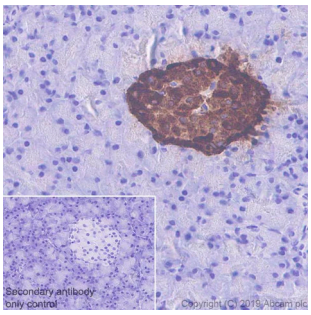
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Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized Neuro-2a (mouse neuroblastoma cell line) cells labeling Chromogranin A with ab254322 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing membranous and cytoplasmic staining in Neuro-2a cell line. The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) at 1/200 dilution (red).

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This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab254322).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Chromogranin A antibody [EPR22537-248] - BSA and Azide free (ab255284)

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

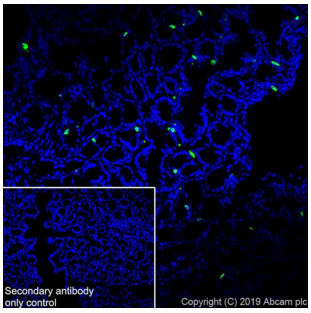
Immunohistochemical analysis of paraffin-embedded rat panceas tissue labeling Chromogranin A with ab254322 at 1/4000 dilution, followed by Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining on rat pancreas islet (PMID: 22412953) is observed. Counter stained with hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.

The section was incubated with ab254322 for 30 mins at RT.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab254322).



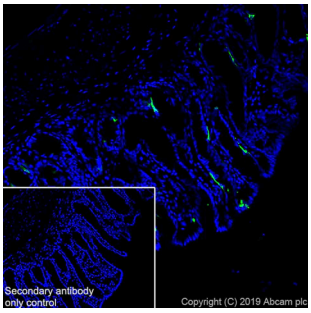
Immunohistochemistry (Frozen sections) - Anti-Chromogranin A antibody [EPR22537-248] - BSA and Azide free (ab255284)

Chromogranin A Immunohistochemistry (Frozen sections) staining using rabbit Anti-Chromogranin A antibody

Frozen section of 4% PFA-fixed, 0.2% Triton X-100 permeabilized mouse colon tissue labeling Chromogranin A with ab254322 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077), at 1/1000 dilution (green). Positive staining on enteroendocrine cells of mouse colon (PMID: 27287799). is observed. The nuclear counter stain is DAPI (blue).
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077), at 1/1000 dilution.

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

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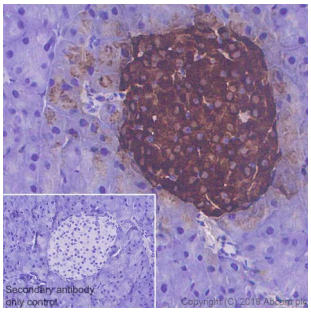
Immunohistochemistry (Frozen sections) - Anti-Chromogranin A antibody [EPR22537-248] - BSA and Azide free (ab255284)

Chromogranin A Immunohistochemistry (Frozen sections) staining using rabbit Anti-Chromogranin A antibody

Frozen section of 4% PFA-fixed, 0.2% Triton X-100 permeabilized rat colon tissue labeling Chromogranin A with ab254322 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077), at 1/1000 dilution (green). Positive staining on enteroendocrine cells of mouse colon (PMID: 27287799) is observed. The nuclear counter stain is DAPI (blue).
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Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.