abcam

ab215276

Anti-Chromogranin A antibody [EP1030Y] - 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	EP1030Y
Purification technique	Affinity purification Protein A
Concentration	1.046 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-

Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

IP

Not recommended

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target data

See full target information CHGA

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 (PubMed:15326220). Displays antibacterial activity against Gram-positive bacteria S.aureus and M.luteus, and Gram-negative bacteria E.coli and P.aeruginosa (PubMed:15723172, PubMed:24723458). Can induce mast cell migration, degranulation and production of cytokines and chemokines (PubMed:21214543). Acts as a potent scavenger of free radicals in vitro (PubMed:24723458). May play a role in the regulation of cardiac function and blood pressure (PubMed:18541522). 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.

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

ab215276 is the carrier-free version of ab68271.

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 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.

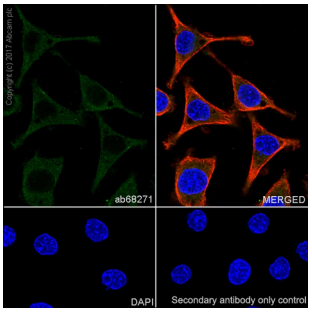
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

---

3 product images

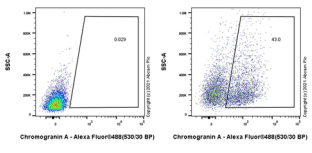


Immunocytochemistry/ Immunofluorescence - Anti-Chromogranin A antibody [EP1030Y] - BSA and Azide free (ab215276)

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

This data was developed using the same antibody clone in a different buffer formulation (ab68271).

Immunocytochemistry analysis of SH-SY5Y (human neuroblastoma epithelial cell) labeling Chromogranin A with purified ab68271 at 1/50 dilution (3 µg/ml). Cells were fixed with 4% Paraformaldehyde and permeabilised with 0.1% tritonX-100. Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/1000 (2 µg/ml) was used as the secondary antibody. ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.17 µg/ml) was used as counterstain. Nuclei were stained blue with DAPI.
Negative control: PBS instead of the primary antibody.



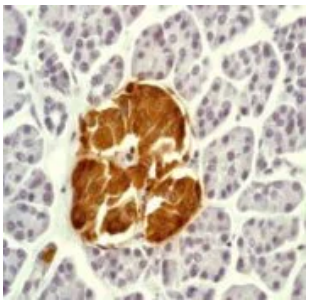
Flow Cytometry (Intracellular) - Anti-Chromogranin A antibody [EP1030Y] - BSA and Azide free (ab215276)

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

This data was developed using ab68271, the same antibody clone in a different buffer formulation.

Flow Cytometry analysis of Jurkat (Human T cell leukemia T lymphocyte, Left) / SH-SY5Y (Human neuroblastoma epithelial cell, Right) cells labeling Chromogranin A with purified ab68271 at 1/200 dilution (1 µg/mL) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at

1/2000. Isotype control - Rabbit monoclonal IgG (Left).
Negative control: Jurkat.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Chromogranin A antibody [EP1030Y] - BSA and Azide free (ab215276)

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

Formalin/PFA-fixed paraffin-embedded human pancreas tissue stained for Chromogranin A with ab68271 at a 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab68271).

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

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