

Anti-Chromogranin A antibody [EPR21058-225] - BSA and Azide free (Detector)

Recombinant

RabMAb

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	EPR21058-225
Purification technique	Affinity purification Protein A
Concentration	1.011 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

sELISA

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.

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

Notes

ab272312 is a BSA and Azide Free antibody supplied in an unconjugated format and it is suitable for sandwich ELISAs to quantify Human Chromogranin A. The recommended pair for sandwich ELISA is:

Capture: ab272311, Human Chromogranin A Capture Antibody (unconjugated)

Detector: ab272312, Human Chromogranin A Detector Antibody (unconjugated)

The reference range value is 56.25 - 3600 pg/ml.

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.

Sandwich ELISA

The recommended antibody orientation is based on internal optimization for ELISA-based assays. Antibody orientation is assay dependent and needs to be optimized for each assay type. Please note that the range provided for this antibody is only an estimation based on the performance of the product using the recommended antibody pair. Performance of the antibody pair will depend on the specific characteristics of your assay. We guarantee the product works in sandwich ELISA, but we do not guarantee the sensitivity or dynamic range of the antibody in your assay.

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

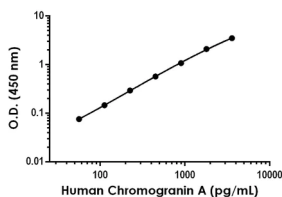
We do not recommend this combination. It is not covered by our product promise.

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](#).

1 product image



Sandwich ELISA - Anti-Chromogranin A antibody [EPR21058-225] - BSA and Azide free (Detector) (ab272312)

Representative standard curve from corresponding SimpleStep ELISA® Kit ([ab270885](#)).

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