abcam

ab283286

Anti-Chromogranin A antibody [RM1025] - 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	Multiclonal
Immunogens	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	RM1025
Concentration	1.029 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, Human
Dilution info	-
Notes	-

Expected

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

IP

Tested

Species	Mouse, Human
Dilution info	-
Notes	-

Expected

Species	Rat
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	-

ELISA

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-Fr

Tested

Species	Mouse, Rat
Dilution info	-
Notes	-

Expected

Species	Human

Dilution info	Use at an assay dependent concentration.
Notes	-

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

ab283286 is the carrier-free version of ab283265.
What are recombinant multiclonals?
Recombinant multiclonals are a mixture of recombinant antibodies co-expressed from a library of heavy and light chains. They offer several advantages including:

- The sensitivity of polyclonal antibodies by recognising multiple epitopes
- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

View our range of recombinant multiclonal antibodies.

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.

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

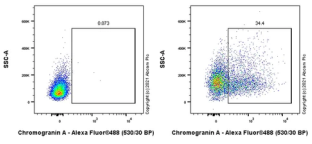
We do not recommend this combination. It is not covered by our product promise.

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.

17 product images

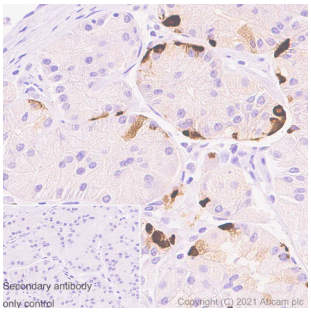


Flow Cytometry (Intracellular) - Anti-Chromogranin A antibody [RM1025] - BSA and Azide free (ab283286)

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

This data was developed using ab283265, the same antibody clone in a different buffer formulation.
Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Jurkat (Human T cell leukemia T lymphocyte / Left) and SH-SY5Y (Human neuroblastoma epithelial cell / Right) cells labelling Chromogranin A with ab283265 at 1/500 dilution (0.1 µg) compared with 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.

Negative control: Jurkat.



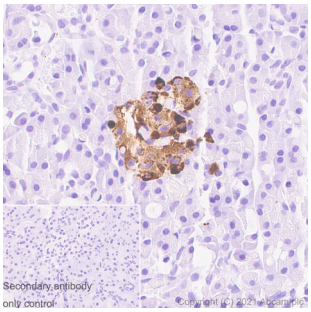
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Chromogranin A antibody [RM1025] - BSA and Azide free (ab283286)

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

This data was developed using ab283265, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded human stomach tissue labelling Chromogranin A with ab283265 at 1/5000 dilution (0.107 µg/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer). Positive staining on the endocrine cells in human stomach. The section was incubated with ab283265 overnight at 4☒. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer).

Heat mediated antigen retrieval using ab93678 (citrate buffer, pH 6.0)



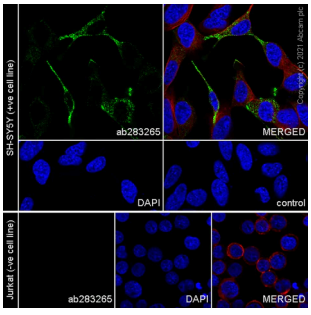
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Chromogranin A antibody [RM1025] - BSA and Azide free (ab283286)

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

This data was developed using ab283265, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded human pancreas tissue labelling Chromogranin A with ab283265 at 1/5000 dilution (0.107 µg/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer). Positive staining on the islet in human pancreas. The section was incubated with ab283265 overnight at 4☒. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer).

Heat mediated antigen retrieval using ab93678 (citrate buffer, pH 6.0)



Immunocytochemistry/ Immunofluorescence - Anti-Chromogranin A antibody [RM1025] - BSA and Azide free (ab283286)

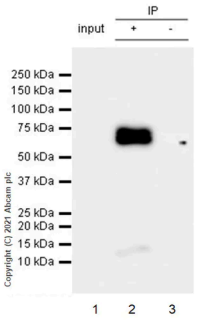
Chromogranin A Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Chromogranin A antibody

This data was developed using ab283265, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized SH-SY5Y (human neuroblastoma cell line from bone marrow) cells labelling Chromogranin A with ab283265 at 1/50 dilution (10.74 µg/ml), followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 dilution (2 µg/ml) (Green). Confocal image showing cytoplasmic staining in subsets of SH-SY5Y cells.

Negative control: Jurkat.

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (2.5 µg/ml) (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.



Immunoprecipitation - Anti-Chromogranin A antibody [RM1025] - BSA and Azide free (ab283286)

This data was developed using ab283265, the same antibody clone in a different buffer formulation.
Chromogranin A was immunoprecipitated from 0.35 mg SH-SY5Y (Human neuroblastoma epithelial cell) whole cell lysate with ab283265 at 1/30 dilution (2 µg in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab283265 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.

Lane 1: SH-SY5Y (Human neuroblastoma epithelial cell) whole cell lysate 10ug

Lane 2: ab283265 IP in SH-SY5Y whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab283265 in SH-SY5Y whole cell lysate

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

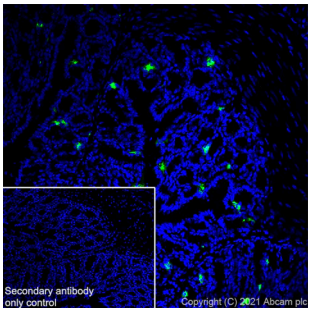
Exposure time: 30 seconds

Lower bands could be cleavage fragment. (PMID: 17991725)

All lanes:
Immunoprecipitation - Anti-Chromogranin A antibody [RM1025] (ab283265)

Predicted band size: 50 kDa

Observed band size: 75 kDa

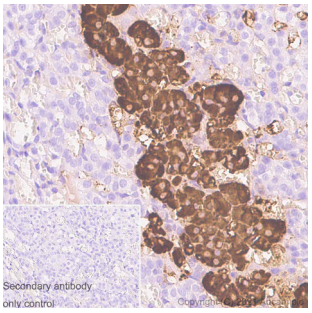


Immunohistochemistry (Frozen sections) - Anti-Chromogranin A antibody [RM1025] - BSA and Azide free (ab283286)

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

This data was developed using ab283265, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen mouse colon (fresh) tissue labeling Chromogranin A with ab283265 at 1/500 dilution (1.074 µg/ml) dilution followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution (2 µg/ml) (Green). Positive satining on mouse colon 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.



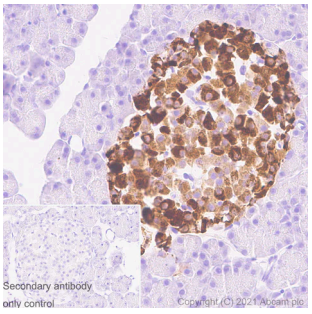
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Chromogranin A antibody [RM1025] - BSA and Azide free (ab283286)

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

This data was developed using ab283265, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded rat adrenal gland tissue labelling Chromogranin A with ab283265 at 1/5000 dilution (0.107 µg/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer). Positive staining in the rat adrenal gland. The section was incubated with ab283265 overnight at 4☒. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer).

Heat mediated antigen retrieval using ab93678 (citrate buffer, pH 6.0)



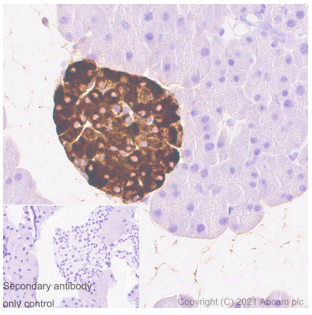
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Chromogranin A antibody [RM1025] - BSA and Azide free (ab283286)

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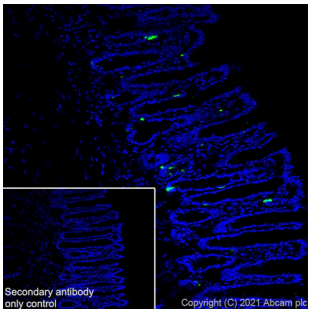
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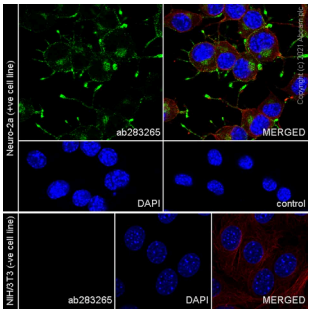


Immunohistochemistry (Frozen sections) - Anti-Chromogranin A antibody [RM1025] - BSA and Azide free (ab283286)

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Secondary antibody control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed.



Immunocytochemistry/ Immunofluorescence - Anti-Chromogranin A antibody [RM1025] - BSA and Azide free (ab283286)

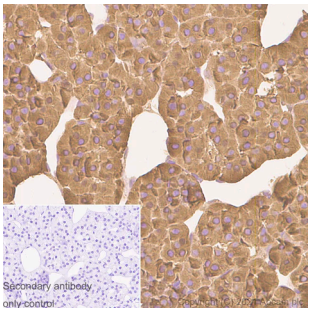
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Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized Neuro-2a (mouse neuroblastoma cell line) cells labelling Chromogranin A with ab283265 at 1/50 dilution (10.74 µg/ml), followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 dilution (2 µg/ml) (Green). Confocal image showing cytoplasmic staining in of Neuro-2a cells.

Negative control: NIH/3T3 (PMID: 7615829).

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (2.5 µg/ml) (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.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Chromogranin A antibody [RM1025] - BSA and Azide free (ab283286)

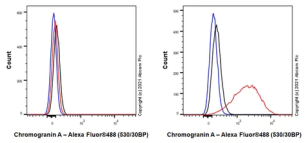
Chromogranin A Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Chromogranin A antibody

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Immunohistochemical analysis of paraffin-embedded mouse adrenal gland tissue labelling Chromogranin A with ab283265 at 1/5000 dilution (0.107 µg/ml) followed by a ready to use Goat

Anti-Rabbit IgG H&L (HRP polymer). Positive staining in the mouse adrenal gland. The section was incubated with ab283265 overnight at 4□. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer).

Heat mediated antigen retrieval using ab93678 (citrate buffer, pH 6.0)

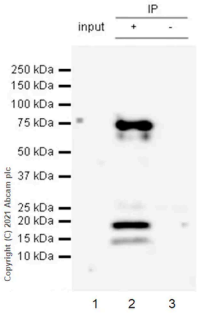


Flow Cytometry (Intracellular) - Anti-Chromogranin A antibody [RM1025] - BSA and Azide free (ab283286)

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

This data was developed using ab283265, the same antibody clone in a different buffer formulation.
Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized NIH/3T3 (Mouse embryonic fibroblast / Left) and Neuro-2a (Mouse neuroblastoma neuroblast / Right) cells labelling Chromogranin A with ab283265 at 1/500 dilution (0.1 µg / 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, ab150077) at 1/2000 dilution was used as the secondary antibody.

Negative control: NIH/3T3. (PMID: 7615829)



Immunoprecipitation - Anti-Chromogranin A antibody [RM1025] - BSA and Azide free (ab283286)

This data was developed using ab283265, the same antibody clone in a different buffer formulation.
Chromogranin A was immunoprecipitated from 0.35 mg Neuro-2a (Mouse neuroblastoma neuroblast) whole cell lysate with ab283265 at 1/30 dilution (2 µg in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab283265 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.

Lane 1: Neuro-2a (Mouse neuroblastoma neuroblast) whole cell lysate 10ug

Lane 2: ab283265 IP in Neuro-2a whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab283265 in Neuro-2a whole cell lysate

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

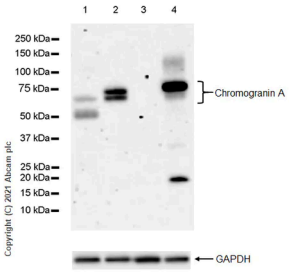
Exposure time: 3 min

Lower bands could be cleavage fragment. (PMID: 17991725)

All lanes:
Immunoprecipitation - Anti-Chromogranin A antibody [RM1025] (ab283265)

Predicted band size: 50 kDa

Observed band size: 75 kDa



Western blot - Anti-Chromogranin A antibody [RM1025] - BSA and Azide free (ab283286)

Chromogranin A Western blot staining using rabbit Anti-Chromogranin A antibody

This data was developed using ab283265, the same antibody clone in a different buffer formulation.
Blocking and diluting buffer and concentration: 5% NFDM/TBST

Negative control: Jurkat.

The molecular weight observed is consistent with what has been described in the literature (PMID: 14734658, 21052719).

This blot was developed using a higher sensitivity ECL substrate.

Exposure time: 3 min

All lanes:
Western blot - Anti-Chromogranin A antibody [RM1025] (ab283265) at 1/1000 dilution

Lane 1:
Human adrenal gland lysate at 20 µg

Lane 2:
SH-SY5Y (Human neuroblastoma epithelial cell) whole cell lysate at 20 µg

Lane 3:
Jurkat (Human T cell leukemia T lymphocyte) whole cell lysate at 20 µg

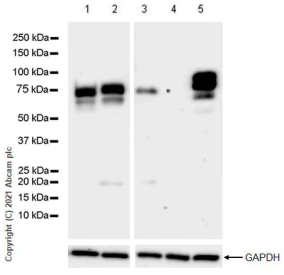
Lane 4:
Neuro-2a (Mouse neuroblastoma neuroblast) whole cell lysate at 20 µg

Secondary

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

Predicted band size: 50 kDa

Observed band size: 20 kDa, 75 kDa



Western blot - Anti-Chromogranin A antibody [RM1025] - BSA and Azide free (ab283286)

Chromogranin A Western blot staining using rabbit Anti-Chromogranin A antibody

This data was developed using ab283265, the same antibody clone in a different buffer formulation.
Blocking and diluting buffer and concentration: 5% NFDM/TBST

Negative control: NIH/3T3. (PMID: 7615829)

Exposure time: Lane 1-2: 5 seconds Lane 3-5: 92 seconds

All lanes:
Western blot - Anti-Chromogranin A antibody [RM1025] (ab283265) at 1/1000 dilution

Lane 1:
Mouse adrenal gland lysate at 20 µg

Lane 2:
Rat adrenal gland lysate at 20 µg

Lane 3:
Neuro-2a (Mouse neuroblastoma neuroblast) whole cell lysate at 20 µg

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

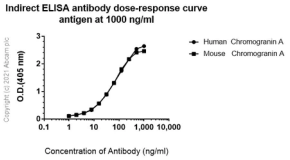
Lane 5:
PC-12 (Rat adrenal gland pheochromocytoma) whole cell lysate at 20 µg

Secondary

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

Predicted band size: 50 kDa

Observed band size: 20 kDa, 75 kDa



ELISA - Anti-Chromogranin A antibody [RM1025] - BSA and Azide free (ab283286)

This data was developed using ab283265, the same antibody clone in a different buffer formulation.
ELISA using ab283265 at varying antibody concentrations and antigen concentration at 1000 ng/ml. An Alkaline Phosphatase-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L) (1/2500) was used as the secondary antibody.

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