abcam

ab254259

Anti-Amylin/DAP antibody [EPR22556-138]

Recombinant | RabMAb | Advanced Validation

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR22556-138
Purification technique	Affinity purification Protein A
Concentration	0.547 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Mouse
Dilution info	1/30
Notes	-

Expected

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

WB

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Expected

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

IHC-Fr

Tested

Species	Mouse
Dilution info	1/500
Notes	Heat mediated antigen retrieval using sodium citrate buffer (10 mM citrate pH 6.0 and 0.05% Tween-20).

Species	Rat

Dilution info	1/500
Notes	Heat mediated antigen retrieval using sodium citrate buffer (10 mM citrate pH 6.0 and 0.05% Tween-20).

Expected

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

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Expected

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

IHC-P

Tested

Species	Mouse
Dilution info	1/2000
Notes	-

Species	Rat
Dilution info	1/2000
Notes	-

Species	Human

Dilution info	1/2000
Notes	-

mIHC

Tested

Species	Rat
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	1/2000
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	-

Target data

See full target information Islet amyloid polypeptide

Function	Amylin/IAPP is a glucoregulatory peptide hormone that plays an important role in the regulation of energy homeostasis (PubMed:2690069). Selectively inhibits insulin-stimulated glucose utilization and glycogen deposition in muscle, while not affecting adipocyte glucose metabolism. IAPP function is mediated by the CALCR-RAMPs (AMYRs) receptor complexes (By similarity). Amylin can also bind CALCR receptor in the absence of RAMPs, although it is more selective for AMYRs (By similarity).

Storage

Shipped at conditions	Conditional Ambient

Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

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.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Amylin also known as Islet Amyloid Polypeptide (IAPP) is a peptide hormone mainly produced and co-secreted with insulin by pancreatic beta cells. This peptide has a molecular mass of approximately 3.9 kDa. Amylin is highly expressed in the pancreas with some expression in the gastrointestinal tract and the central nervous system. In images DAP typically refers to 4'6-diamidino-2-phenylindole which isn't directly related to amylin but this clarification can avoid confusion in laboratory discussions.
Biological function summary	Amylin peptide regulates blood glucose levels by slowing gastric emptying and promoting satiety. It acts as part of a complex with calcitonin receptor and a receptor activity-modifying protein to mediate its effects efficiently. Amylin influences the central nervous system by affecting appetite and has roles in bone metabolism through interactions with receptors related to alkaline phosphatase 138.
Pathways	Amylin functions in the glucose homeostasis and energy regulation pathways. It closely works with insulin impacting how the body manages postprandial glucose

	spikes. The peptide also interacts with cAMP signaling which is part of the same network that involves proteins like glucagon-like peptide-1 (GLP-1) which harmonizes action between different metabolic regulatory components.
Associated diseases and disorders	Amylin accumulates in the form of amyloid deposits in type 2 diabetes contributing to the degeneration of beta cells. The presence of amylin aggregates connects with insulin in this pathology aggravating disease progression. Moreover the peptide plays a part in Alzheimer's disease where its amyloidogenic properties may have overlapping mechanisms with amyloid beta deposits impacting neurodegeneration through similar receptor pathways.

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

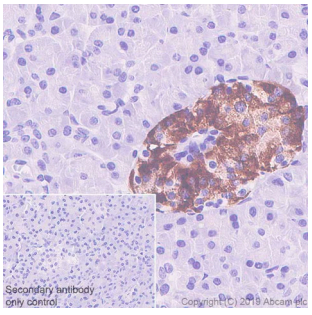
We do not recommend this combination. It is not covered by our product promise.

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.

11 product images



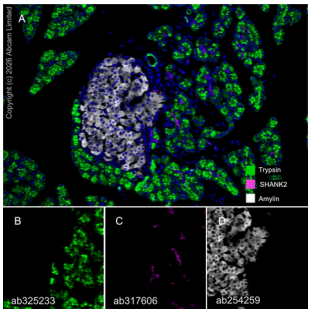
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Amylin/DAP antibody [EPR22556-138] (ab254259)

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

Immunohistochemical analysis of paraffin-embedded human pancreas tissue labeling Amylin/DAP with ab254259 at 1/2000 dilution, followed by ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Cytoplasmic staining on the islet in human pancreas (PMID: 30014749).

The section was incubated with ab254259 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is 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 solution 2) for 20 mins.



Multiplex immunohistochemistry - Anti-Amylin/DAP antibody [EPR22556-138] (ab254259)

Amylin/DAP Multiplex immunohistochemistry staining of Rat pancreas using rabbit Anti-Amylin/DAP antibody

Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded rat pancreas tissue staining Trypsin with ab325233 at a 1/500 (0.98 µg/ml) dilution, ab317606 anti-SHANK2 used at a 1/100 (5.21 µg/ml) dilution and ab254259 anti-Amylin used at a 1/2000 (0.26 µg/ml) dilution.
Panel A: anti-Trypsin (green; Opal™690), anti-SHANK2 (magenta; Opal™520), anti-Amylin (gray; Opal™570) on rat pancreas.

Panel B: anti-Trypsin staining exocrine gland in rat pancreas.

Panel C: anti-SHANK2 staining pancreatic ducts in rat pancreas.

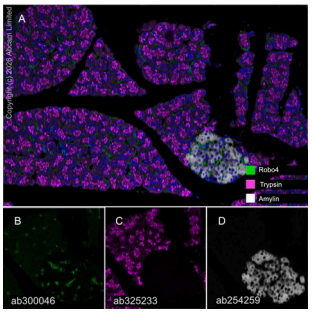
Panel D: anti-Amylin staining islet cells in rat pancreas.

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

The section was incubated in three rounds of staining: in the order of ab325233, ab317606 and ab254259 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. Image acquisition was performed with Leica SP8 confocal microscope.

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



Multiplex immunohistochemistry - Anti-Amylin/DAP antibody [EPR22556-138] (ab254259)

Amylin/DAP Multiplex immunohistochemistry staining of Rat pancreas using rabbit Anti-Amylin/DAP antibody

Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded rat pancreas tissue staining Robo4 with ab300046 at a 1/100 (3.75 µg/ml) dilution, ab325233 anti-Trypsin used at a 1/500 (0.98 µg/ml) dilution and ab254259 anti-Amylin used at a 1/2000 (0.26 µg/ml) dilution.
Panel A: anti-Robo4 (green; Opal™570), anti-Trypsin (magenta; Opal™690), anti-Amylin (gray; Opal™570) on rat pancreas.

Panel B: anti-Robo4 staining endothelium in rat pancreas.

Panel C: anti-Trypsin staining exocrine gland in rat pancreas.

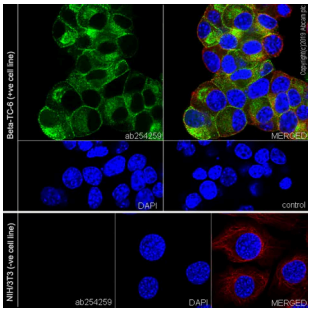
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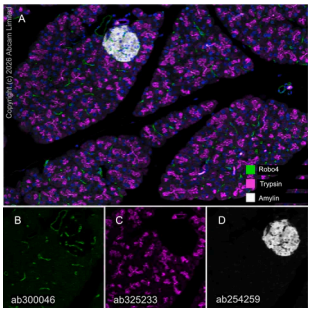
Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunocytochemistry/ Immunofluorescence - Anti-Amylin/DAP antibody [EPR22556-138] (ab254259)

Amylin/DAP Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Amylin/DAP antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized Beta-TC-6 (mouse pancreas insulinoma beta cell) cells labeling Amylin/DAP with ab254259 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic and membranous staining in Beta-TC-6 cell line. **Negative control:** NIH/3T3 (PMID:15802374). The nuclear counter stain is DAPI (blue). Counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) at a 1/200 dilution (red). The negative control is the secondary antibody only.



Multiplex immunohistochemistry - Anti-Amylin/DAP antibody [EPR22556-138] (ab254259)

Amylin/DAP Multiplex immunohistochemistry staining of Mouse pancreas using rabbit Anti-Amylin/DAP antibody

Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded mouse pancreas tissue staining Robo4 with ab300046 at a 1/100 (3.75 µg/ml) dilution, ab325233 anti-Trypsin used at a 1/500 (0.98 µg/ml) dilution and ab254259 anti-Amylin used at a 1/2000 (0.26 µg/ml) dilution.
Panel A: anti-Robo4 (green; Opal™570), anti-Trypsin (magenta; Opal™690), anti-Amylin (gray; Opal™570) on mouse pancreas.

Panel B: anti-Robo4 staining endothelium in mouse pancreas.

Panel C: anti-Trypsin staining exocrine gland in mouse pancreas.

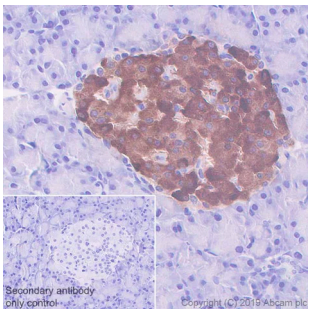
Panel D: anti-Amylin staining islet cells in mouse pancreas.

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

The section was incubated in three rounds of staining: in the order of ab300046, ab325233 and ab254259 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. Image acquisition was performed with Leica SP8 confocal microscope.

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

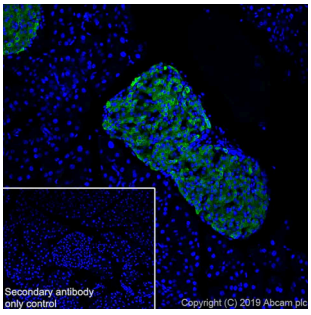


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Amylin/DAP antibody [EPR22556-138] (ab254259)

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

Immunohistochemical analysis of paraffin-embedded rat pancreas tissue labeling Amylin/DAP with ab254259 at 1/2000 dilution, followed by ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Cytoplasmic staining on the islet in rat pancreas (PMID: 30014749). The section was incubated with ab254259 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

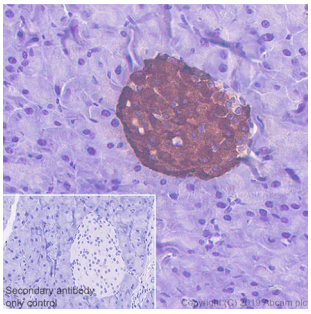
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.



Immunohistochemistry (Frozen sections) - Anti-Amylin/DAP antibody [EPR22556-138] (ab254259)

Amylin/DAP Immunohistochemistry (Frozen sections) staining using rabbit Anti-Amylin/DAP antibody

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen mouse pancreas tissue labeling Amylin/DAP with ab254259 at 1/500 dilution (green), followed by ab150077 AlexaFluor®488 Goat anti-Rabbit secondary at a 1/1,000 dilution. Positive staining on beta cells of mouse pancreatic islets (PMID: 14656003) is observed. Counterstained with DAPI (blue). Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ab150077 AlexaFluor®488 Goat anti-Rabbit used at a 1/1,000 dilution. Heat mediated antigen retrieval using sodium citrate buffer (10 mM citrate pH 6.0 and 0.05% Tween-20).

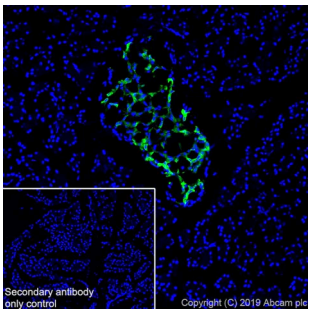


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Amylin/DAP antibody [EPR22556-138] (ab254259)

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

Immunohistochemical analysis of paraffin-embedded mouse pancreas tissue labeling Amylin/DAP with ab254259 at 1/2000 dilution, followed by ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Cytoplasmic staining on the islet in mouse pancreas (PMID: 30014749). The section was incubated with ab254259 for 10 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

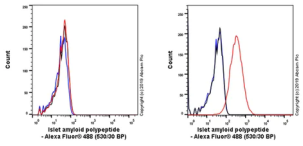
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.



Immunohistochemistry (Frozen sections) - Anti-Amylin/DAP antibody [EPR22556-138] (ab254259)

Amylin/DAP Immunohistochemistry (Frozen sections) staining using rabbit Anti-Amylin/DAP antibody

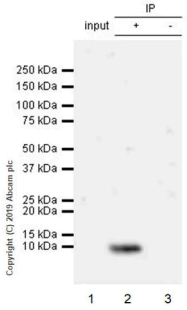
Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen rat pancreas tissue labeling Amylin/DAP with ab254259 at 1/500 dilution (green), followed by ab150077 AlexaFluor®488 Goat anti-Rabbit secondary at a 1/1,000 dilution. Positive staining on beta cells of rat pancreatic islets (PMID: 14656003) is observed. Counterstained with DAPI (blue). Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ab150077 AlexaFluor®488 Goat anti-Rabbit used at a 1/1,000 dilution. Heat mediated antigen retrieval using sodium citrate buffer (10 mM citrate pH 6.0 and 0.05% Tween-20).



Flow Cytometry (Intracellular) - Anti-Amylin/DAP antibody [EPR22556-138] (ab254259)

Amylin/DAP Flow Cytometry (Intracellular) staining using rabbit Anti-Amylin/DAP antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol permeabilized NIH/3T3 (Mouse embryonic fibroblast, Left) / Beta-TC-6 (Mouse pancreas insulinoma beta cell, Right) cell lines labeling Amylin/DAP with ab254259 at 1/500 (red) compared with a Rabbit monoclonal IgG isitype control (ab172730) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077), at 1/2000 dilution was used as the secondary antibody. **Negative control:** NIH/3T3 (PMID:15802374).



Immunoprecipitation - Anti-Amylin/DAP antibody [EPR22556-138] (ab254259)

Amylin/DAP was immunoprecipitated from 0.35 mg Beta-TC-6 (mouse pancreas insulinoma beta cell) whole cell lysate with ab254259 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab254259 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used at 1/5000 dilution.
Lane 1: Beta-TC-6 whole cell lysate 10 µg (Input).
Lane 2: ab254259 IP in Beta-TC-6 whole cell lysate.
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab254259 in Beta-TC-6 whole cell lysate.

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time: 3 minutes.

All lanes:
Immunoprecipitation - Anti-Amylin/DAP antibody [EPR22556-138] (ab254259)

Predicted band size: 10 kDa

Observed band size: 10 kDa

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