abcam

ab77192

Anti-Pancreatic Polypeptide antibody

Key facts

Isotype	IgG
Host species	Goat
Storage buffer	pH: 7.3 Preservative: 0.02% Sodium azide Constituents: Tris buffered saline, 0.5% BSA
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Human PPY aa 50-100. The exact immunogen used to generate this antibody is proprietary information. Database link P01298
Purification technique	Affinity purification Immunogen
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from goat serum by ammonium sulphate precipitation followed by antigen affinity chromatography using the immunizing peptide.

Reactivity data

WB

Expected

Species	Human
Dilution info	-

Notes	Preliminary experiments gave an approx 35-38 kDa band in human pancreas lysate, which was successfully blocked by incubation with the immunizing peptide. Please note that currently we cannot find an explanation in the literature for the band we observe given the calculated size of 10.5 kDa.

Species	Mouse
Dilution info	-
Notes	Preliminary experiments gave an approx 35-38 kDa band in human pancreas lysate, which was successfully blocked by incubation with the immunizing peptide. Please note that currently we cannot find an explanation in the literature for the band we observe given the calculated size of 10.5 kDa.

Predicted

Species	Rat, Dog, Chimpanzee, Macaque monkey
Dilution info	-
Notes	-

ELISA

Expected

Species	Mouse
Dilution info	-
Notes	Antibody detection limit dilution 1:32,000 by peptide ELISA.

Species	Human
Dilution info	-
Notes	Antibody detection limit dilution 1:32,000 by peptide ELISA.

Predicted

Species	Rat, Dog, Chimpanzee, Macaque monkey
Dilution info	-
Notes	-

ICC/IF

Expected

Species	Mouse
Dilution info	-
Notes	See Abreview.

Species	Human
Dilution info	-
Notes	See Abreview.

Predicted

Species	Rat, Dog, Chimpanzee, Macaque monkey
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	3-5 µg/mL
Notes	In paraffin embedded human pancreas, shows strong cytoplasmic staining of rare cells located at the periphery of islets of Langerhans.

Predicted

Species	Mouse, Rat, Dog, Chimpanzee, Macaque monkey
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	10 µg/mL
Notes	-

Predicted

Species	Mouse, Rat, Dog, Chimpanzee, Macaque monkey
Dilution info	-
Notes	-

Target data

See full target information PPY

Function	Pancreatic polypeptide. Hormone secreted by pancreatic cells that acts as a regulator of pancreatic and gastrointestinal functions probably by signaling through the G protein-coupled receptor NPY4R2.

Storage

Shipped at conditions	Blue Ice
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

Supplementary info

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

Activity summary	Pancreatic Polypeptide also known as PP is a small protein with a molecular mass approximately 4200 Da. It is secreted by PP cells in the pancreas particularly in the F-cells located in the Langerhans islets. This peptide is highly conserved among different species including the rat where it displays similar function and expression patterns. Pancreatic polypeptide regulates various physiological processes by binding to specific receptors on target tissues.
Biological function summary	In various mammalian species including rats pancreatic polypeptide plays a significant role in the regulation of appetite and pancreatic secretion. It is not recognized as part of a multi-protein complex but it directly influences the function of digestive organs by inhibiting pancreatic exocrine secretions and gallbladder

	contraction. This makes it an important mediator in controlling the body's energy balance and digestive functions.
Pathways	Pancreatic polypeptide is involved in the peptidergic pathway regulating energy homeostasis and digestive processes. It interacts with the Y receptor family particularly the Y4 receptor which contributes to its regulatory actions on appetite and digestive enzyme secretion. This peptide works alongside other polypeptides such as neuropeptide Y and peptide YY in mediating these complex physiological pathways.
Associated diseases and disorders	Pancreatic polypeptide levels relate to conditions such as obesity and diabetes. Altered secretion of this peptide can contribute to obesity by affecting appetite regulation and energy homeostasis. Furthermore in diabetes pancreatic polypeptide is connected to abnormal pancreatic function often observed alongside insulin and glucagon dysregulation. Understanding these relationships can provide insight into therapeutic strategies targeting metabolic and endocrine disorders.

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

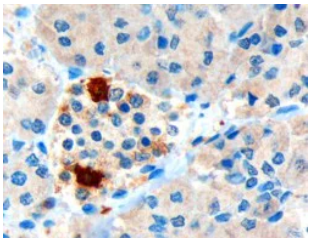
We do not recommend this combination. It is not covered by our product promise.

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.

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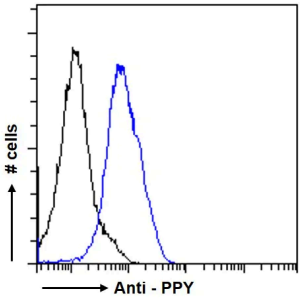
3 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pancreatic Polypeptide antibody (ab77192)

Pancreatic Polypeptide Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using goat Anti-Pancreatic Polypeptide antibody

Staining of formalin-fixed, paraffin-embedded human pancreas tissue with 3µg/ml ab77192. Note strong cytoplasmic staining of rare cells located at the periphery of islets of Langerhans. Microwaved antigen retrieval with Tris/EDTA buffer pH6, HRP-staining.



Flow Cytometry (Intracellular) - Anti-Pancreatic Polypeptide antibody (ab77192)

Pancreatic Polypeptide Flow Cytometry (Intracellular) staining using goat Anti-Pancreatic Polypeptide antibody

Flow cytometric analysis of paraformaldehyde fixed U2OS cells (blue line), permeabilized with 0.5% Triton. Primary incubation 1hr (10ug/ml) followed by Alexa Fluor 488 secondary antibody (1ug/ml). IgG control: Unimmunized goat IgG (black line) followed by Alexa Fluor 488 secondary antibody.

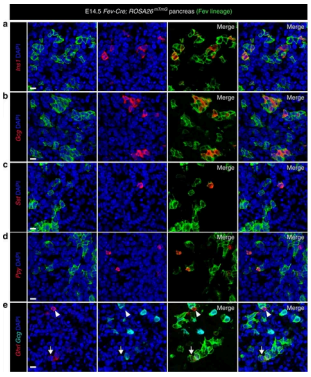


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Immunohistochemistry - Anti-Pancreatic Polypeptide antibody (ab77192)

Pancreatic Polypeptide Immunohistochemistry staining using goat Anti-Pancreatic Polypeptide antibody

Immunohistochemistry-immunofluorescence using Anti-Pancreatic Polypeptide antibody, ab77192. Publication image from Meyer, N. P. et al., 2018, Nat Commun, 30254276. Legend direct from paper.

Differentiated hormone+ endocrine cells transit through a Fev-expressing stage during pancreatic development. a–e Dual IF (for membrane GFP) and fluorescent ISH for hormones in Fev-Cre; ROSA26mTmG lineage-traced animals at E14.5. n = 46 cells of 4 pancreata for Ins1 (100% labeled-lineage); n = 103 of 4 pancreata cells for Gcg (100% lineage-labeled); n = 6 cells of 2 pancreata for Sst (100% lineage-labeled); n = 26 cells of 2 pancreata for Ghrl/Gcg (23.2% lineage-labeled); n = 71 cells of 8 pancreata for Ppy (90.1% lineage labeled). Scale bar represents 10 µm. f Schematic of E14.5 Fev-Cre; ROSA26mTmG FACS sorting and single-cell RNA sequencing. g Representative FACS plots of sorted single, live GFP+ and TdTomato+/GFP− cells from dissociated pancreata used for single-cell sequencing. h t-SNE visualization of endocrine cells in Fev-lineage-traced E14.5 mouse pancreata (n = 3). i Expression of major markers of endocrine cell types. Color indicates level of expression, except for the eGFP plot, which indicates presence or absence of eGFP counts

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