abcam

ab133757

Anti-NPY5R antibody [EPR8382]

Recombinant | RabMAb

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	EPR8382
Purification technique	Affinity purification Protein A
Dissociation constant	1.8 x 10^{-11} M

Reactivity data

WB

Tested

Species	Human
Dilution info	1/10000 - 1/50000
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/250 - 1/500
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information NPY5R

Function	Receptor for neuropeptide Y and peptide YY. The activity of this receptor is mediated by G proteins that inhibit adenylate cyclase activity. Seems to be associated with food intake. Could be involved in feeding disorders.

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	Stable for 12 months at -20°C

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	NPY5R also known as the Neuropeptide Y receptor Y5 plays an important role in the human body. It is a G-protein-coupled receptor with a molecular weight around 50 kDa. NPY5R is mainly expressed in the central nervous system especially in the hypothalamus. This receptor is one of several receptors that bind to the neuropeptide Y (NPY) peptide YY (PYY) and pancreatic polypeptide (PP) which are involved in various physiological processes.
Biological function summary	NPY5R influences several important functions related to energy balance and feeding behavior. It is part of the NPY receptor family and works by activating intracellular signaling pathways that affect appetite regulation and energy homeostasis. The receptor's activity can modulate food intake making it an important player in energy metabolism. It does not form part of a protein complex but interacts directly with ligands such as NPY and PYY.
Pathways	NPY5R participates in the neuropeptide signaling pathway and the G-protein-coupled receptor pathway. These pathways significantly impact the regulation of hunger and satiety signals. NPY5R closely interacts with other neuropeptide Y receptors such as NPY1R and NPY2R which together create a network that regulates feeding behavior and body weight. These interactions amplify the receptor's role in the central control of energy balance.
Associated diseases and disorders	NPY5R has a connection to obesity and metabolic syndromes due to its involvement in appetite and energy regulation. Its dysregulation is linked to increased food intake and weight gain. Additionally the receptor has associations with conditions such as anxiety where altered NPY signaling may impact stress responses. NPY and its receptors including NPY5R also relate to other receptors like NPY2R in the modulation of emotional states and metabolic diseases making it a potential target for therapeutic interventions in these conditions.

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

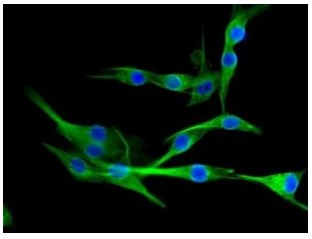
We do not recommend this combination. It is not covered by our product promise.

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.

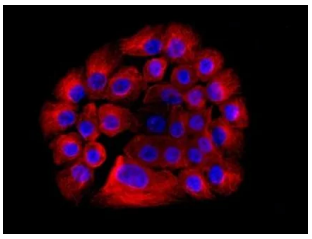
5 product images



Immunocytochemistry/ Immunofluorescence - Anti-NPY5R antibody [EPR8382] (ab133757)

NPY5R Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-NPY5R antibody

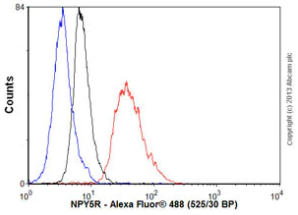
Immunofluorescent staining of U87 MG cells labelling NPY5R with ab133757 at 1/250.



Immunocytochemistry/ Immunofluorescence - Anti-NPY5R antibody [EPR8382] (ab133757)

NPY5R Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-NPY5R antibody

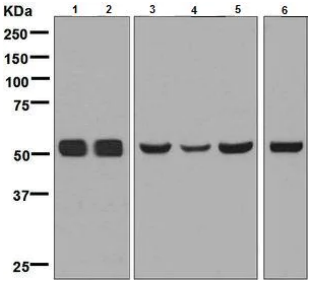
Immunofluorescent staining of BxPC3 cells labelling NPY5R with ab133757 at 1/250.



Flow Cytometry (Intracellular) - Anti-NPY5R antibody [EPR8382] (ab133757)

NPY5R Flow Cytometry (Intracellular) staining using rabbit Anti-NPY5R antibody

Overlay histogram showing SHSY-5Y cells stained with ab133757 (red line). The cells were fixed with 80% methanol (5 min) and incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab133757 1/10000 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (0.1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. This antibody gave a positive result in 4% paraformaldehyde (10 min) fixed SHSY-5Y cells used under the same conditions. Please note that Abcam do not have any data for use of this antibody on non-fixed cells. We welcome any customer feedback.



Western blot - Anti-NPY5R antibody [EPR8382] (ab133757)

All lanes:
Western blot - Anti-NPY5R antibody [EPR8382] (ab133757) at 1/10000 dilution

Lane 1:
Human hypothalamus lysate at 10 µg

Lane 2:

Human fetal brain lysate at 10 µg

Lane 3:
Ramos cell lysate at 10 µg

Lane 4:
U87 MG cell lysate at 10 µg

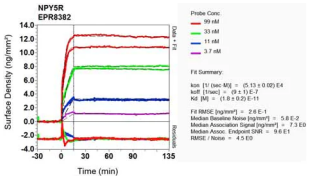
Lane 5:
Caco 2 cell lysate at 10 µg

Lane 6:
BxPC 3 cell lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit HRP conjugated antibody at 1/2000 dilution

Predicted band size: 51 kDa



OI-RD Scanning - Anti-NPY5R antibody [EPR8382] (ab133757)

We have systematically measured KD (the equilibrium dissociation constant between the antibody and its antigen), of more than 840 recombinant antibodies to assess not only their individual KD values but also to see the average affinity of antibody. Based on the comparison with published literature values for mouse monoclonal antibodies, Recombinant antibodies appear to be on average 1-2 order of magnitude higher affinity.

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