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Antibodies to Neuropeptide Y Receptor Y5 (NPY5R)

Neuropeptide Y Receptor Y5 antibodies. Catalog # NPY5R-501AP, P-NPY5R and PC-NPY5R.

Accession # 070342 and Alternate Nomenclature: NPY-Y5 Receptor; Y5 receptor

Neuropeptide Y Receptor Y5 (NPY5R) is a G-Protein Coupled Receptor of the Neuropeptide Y (NPY) receptor family; it is located at human chromosome 4q31-32(1). It is activated by the binding of NPY, a neurotransmitter in the central and peripheral nervous system that is thought to have a major role in the physiological control of energy homeostasis (2). NPY's role in energy homeostasis is mediated primarily via NPY5R. NPY5R is a mediator of NPY-induced feeding, fat thermogenesis and energy expenditure (3). It is involved in the regulation and development of diet-induced obesity. In mice, Y5 antagonist produced a fat-selective loss of body weight and ameliorated obesity-associated insulin resistance in diet-induced obese mice (4). Therefore, NPY5R is a potential target in the development of novel treatment of obesity and related feeding disorders.

NPY5R also plays a critical role in modulation of hippocampal excitatory transmission at the hilar-to-CA3 synapse in the mouse (5). It regulates hippocampal seizures. In mice, following seizure activity NPY levels are up-regulated in the brain which then up-regulates NPY5R expression. Activation of NPY5R has been shown to reduce generalized seizures (6). It is strongly expressed in cortex, putamen, claudate nucleus, CA3 subfield of the ventral hippocampus, amygdala, small intestine and colon. NPY5R is approximately a 56kDa protein (466 amino acids).

The NPY5R-selective antibodies were generated against purified Neuropeptide Y Receptor Y5 (NPY5R) protein. NPY5R-antibodies are affinity purified over immobilized antigen based chromatography, and the purified immunoglobulins are stabilized in antibody stabilization buffer. FabGennix Int. Inc., will also provide limited quantities of antigenic blocking protein for NPY5R-501AP antibody. Antibodies to NPY5R (NPY5R-501AP) will label ~56kDa protein in Western blot positive control samples for NPY5R and several other tissues. FabGennix Inc. will also conjugate antibodies with secondary enzymes (alk-Pase or HRP) or fluorescent probes upon request at nominal cost. For a complete listing of GPCR antibodies, please visit www.FabGennix.com.

Catalog #	Host Species	Nature	Cross reactivity	Quantity	Volume
NPY5R-501 AP	Rabbit	Affinity purified NPY5R antibodies	H, others n.d	100 ug	200ul
FITC- NPY5R	Rabbit	FITC-conjugated NPY5R antibody	H, others n.d	100ug	200ul
P- NPY5R	n/a	Antigenic blocking peptide for NPY5R -501AP	n/a	250 ug	100ul
PC- NPY5R	n/a	Western blotting positive control for NPY5R	n/a	For 5 appl	Inquire

R = rat; M = mouse; H = human; C = chicken; monk = monkey; * not all variants are labeled equally

Immunogen: Synthetic peptides corresponding to unique epitope on NPY5R. The peptide sequence was selected from C-terminal, 300-360 amino acids. The NPY5R peptide was covalently modified post-synthetically covalently modified to achieve desired antigenicity.

Concentration: NPY5R -501AP: IgG concentration 0.64-0.72 mg/ml in antibody stabilization buffer.

Applications: Antibody NPY5R-101AP is ideal for WB and ELISA applications, other applications have not been tested. These antibodies do not cross react to human lactoferrin, bovine lactoferrin or bovine serum albumin. The species cross reactivity for these antibodies have not been examined fully. The dilutions for this antibody is for reference only, investigators are expected to determine the optimal conditions for specific assay. WB: > 1:500; IMM & i.p pull-down assays: n.d; IHC n.d. ELISA <1:10,000. Application of this antibody in protocols not listed here does not necessarily exclude its use in such procedures.

Reactivity: This antibody detects a single band of approximately 56kDa in PC-NPY5R samples. The antibody does not cross react to other Neuropeptide Y receptor proteins.

Protocols: Standard protocol for various applications (WB; IMM and IHC) of this antibody is provided with the product specification sheet, however, FabGennix Inc., strongly recommends investigators to optimize conditions for use of this antibody in their laboratories.

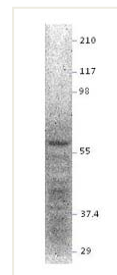
Form/Storage: The antiserum is supplied in antibody stabilization buffer. The affinity-purified antibodies are isolated on immobilized antigen-affinity column and supplied as stabilized product. Store at -20°C for long-term storage. FabGennix Inc. does not recommend storage of very dilute antibody solutions unless they are prepared in specially formulated multi use antibody dilution buffer (Cat # DiluOBuffer). Working solutions of antibodies in DiluOBuffer should be filtered through 0.45um filter after every use for long-term storage.

Notes: Briefly centrifuge to collect liquid, heat or boil PC-NPY5R tube for 1-2 minutes to dissolve any precipitate before use. This product is "ready-to-use" for electrophoresis. After thawing store at room temperature. Repeated freezing and thawing may result in appearance of higher MW immunoreactive bands.

New Reagents: Now you can recycle your western blots (nitrocellulose, supported membranes and PVDF membranes) by using our StripOBuffer (Cat FGI-1989). Each stripping is guaranteed to give better signal (up to 8 stripping). No strong pungent smell of reducing agents or heating required. Block in 5X diluOBuffer and you are ready for blotting with a new antibody

References:

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Western blot of NPY5R-501AP with PC-NPY5R sample. Antibody dilution 1:500 in diluOBuffer, MW of NPY5R is 56-57kDa

* For users who may require large amounts of NPY5R-501AP, please enquire about bulk material discounts. This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.

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