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Anti-Neuromedin U Antibody

Catalog # AP60600

Product Information

Application	WB, IHC, IF/IC
Primary Accession	P48645
Reactivity	Human, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	19741

Additional Information

Gene ID	10874
Other Names	Neuromedin-U
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human Neuromedin U. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	NMU (HGNC:7859)
Function	[Neuromedin-U-25]: Multifunctional neuropeptide that acts via two G protein-coupled receptors, NMUR1 and NMUR2 (PubMed:15331768, PubMed:35440625). Functionally, is involved in pleiotropic roles, including regulation of feeding, energy balance, blood pressure and smooth muscle contraction (By similarity). Additionally modulates hormone release and inflammatory responses in a tissue- and receptor- dependent manner (PubMed:15585845, PubMed:33857254). Mechanistically, binding to NMUR1 or NMUR2 results in coupling of receptors to Galpha proteins, namely GNAQ/Gaq or GNA11/Ga11 and GNAI1/Gai subunits (PubMed:15331768). GNAQ/Gaq or GNA11/Ga11 coupling leads to the activation of a phospholipase C (PLC), which hydrolyzes PIP2 (phosphatidylinositol 4,5-bisphosphate) into DAG (diacylglycerol) and IP3 (inositol trisphosphate), and subsequent intracellular calcium mobilization via IP3 receptors on the endoplasmic reticulum (PubMed:15331768). GNAI1/Gai coupling inhibits forskolin-stimulated cAMP accumulation (PubMed:15331768). In pancreatic beta cells, regulates insulin secretion through NMUR1 coupled to GNAI2 and

GNAO1, resulting in reduced intracellular Ca2+ influx and cAMP levels (PubMed:33857254). Through NMUR1 in Th2-type T cells, enhances type 2 cytokine secretion and modulates inflammatory responses via activation of PLC-calcineurin-MEK and PI3K signaling pathways (PubMed:15585845).

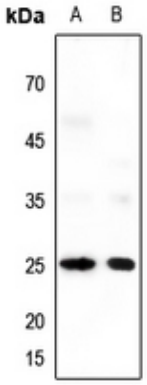
Cellular Location

[Neuromedin-U-25]: Secreted {ECO:0000250|UniProtKB:P12760}

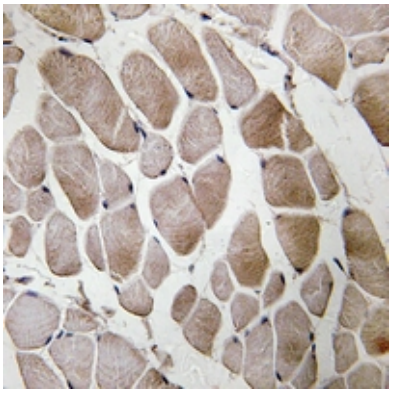
Tissue Location

Expressed throughout the enteric nervous system with highest levels being found in the jejunum. Expressed in gastrointestinal tract (PubMed:7619205).

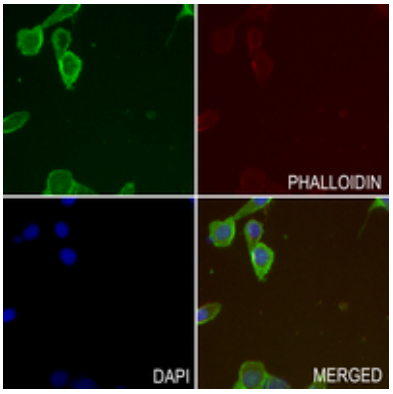
Images



Western blot analysis of Neuromedin U expression in Hela (A), A549 (B) whole cell lysates. (Predicted band size: 19 kD; Observed band size: 25 kD)



Immunohistochemical analysis of Neuromedin U staining in human skeletal muscle formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of Neuromedin U staining in LS8 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

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