

NMU-23 (V-20): sc-16212

BACKGROUND

Neuromedin U (NMU) is a neuropeptide with potent contractile activity on smooth muscle that was first identified in porcine spinal cord. NMU is widely distributed in the gastrointestinal tract and nervous system with highest expression levels in the duodenum and jejunum, and lower expression level in spinal cord, hypothalamus, and stomach. Receptors for NMU are FM-3/NMU1R, which is significantly expressed in peripheral tissues, and FM-4/NMU2R, which is expressed in specific regions of the brain. The 174 amino acid rat NMU precursor encodes more than one bioactive peptide that contains the 23 residue NMU peptide (NMU-23) near the C-terminus of the precursor. NMU has a hydrophobic signal peptide and a number of paired dibasic amino acids, which serve as signals for enzymatic cleavage that releases NMU and other peptides. NMU-23 and other NMU peptides have similar functions, but differ in their lengths and activities which are both tissue and species specific. In rat, NMU-23 stimulates contractions of stomach circular muscle and involves in the central control of feeding. Peripheral activities of NMU include stimulation of smooth muscle, increase of blood pressure, alteration of ion transport in the gut, control of local blood flow and regulation of adrenocortical function.

REFERENCES

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3. Gardiner, S.M., et al. 1990. Regional hemodynamic effects of neuromedin U in conscious rats. *Am. J. Physiol.* 258: R323-R328.
4. Benito-Orfila, M.A., et al. 1991. The motor effect of neuromedin U on rat stomach *in vitro*. *Eur. J. Pharmacol.* 193: 329-333.
5. Lo, G., et al. 1992. Characterization of complementary DNA encoding the rat neuromedin U precursor. *Mol. Endocrinol.* 6: 1538-1544.
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CHROMOSOMAL LOCATION

Genetic locus: NMU (human) mapping to 4q12; Nmu (mouse) mapping to 5 C3.3.

SOURCE

NMU-23 (V-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NMU-23 of rat origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-16212 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NMU-23 (V-20) is recommended for detection of NMU-23 precursor of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NMU-23 (V-20) is also recommended for detection of NMU-23 precursor in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for NMU-23 siRNA (h): sc-42091, NMU-23 siRNA (m): sc-42092, NMU-23 shRNA Plasmid (h): sc-42091-SH, NMU-23 shRNA Plasmid (m): sc-42092-SH, NMU-23 shRNA (h) Lentiviral Particles: sc-42091-V and NMU-23 shRNA (m) Lentiviral Particles: sc-42092-V.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **NMU-23 (A-5): sc-398600**, our highly recommended monoclonal alternative to NMU-23 (V-20).