

NMU-23 (A-5): sc-398600

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

1. Domin, J., et al. 1987. Neuromedin U—a study of its distribution in the rat. *Peptides* 8: 779-784.
2. Steel, J.H., et al. 1988. Localization of 7B2, neuromedin B, and neuromedin U in specific cell types of rat, mouse, and human pituitary, in rat hypothalamus, and in 30 human pituitary and extrapituitary tumors. *Endocrinology* 122: 270-282.
3. Gardiner, S.M., et al. 1990. Regional hemodynamic effects of neuromedin U in conscious rats. *Am. J. Physiol.* 258: R32-R38.

CHROMOSOMAL LOCATION

Genetic locus: *Nmu* (mouse) mapping to 5 C3.3.

SOURCE

NMU-23 (A-5) is a mouse monoclonal antibody raised against amino acids 32-107 mapping within an internal region of NMU-23 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NMU-23 (A-5) is available conjugated to agarose (sc-398600 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398600 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398600 PE), fluorescein (sc-398600 FITC), Alexa Fluor[®] 488 (sc-398600 AF488), Alexa Fluor[®] 546 (sc-398600 AF546), Alexa Fluor[®] 594 (sc-398600 AF594) or Alexa Fluor[®] 647 (sc-398600 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-398600 AF680) or Alexa Fluor[®] 790 (sc-398600 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

NMU-23 (A-5) is recommended for detection of NMU-23 of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

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

Molecular Weight (predicted) of NMU-23: 19 kDa.

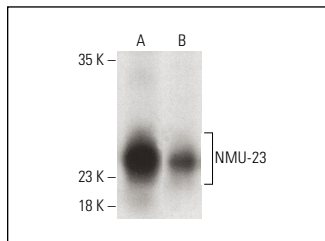
Molecular Weight (observed) of NMU-23: 24 kDa.

Positive Controls: rat small intestine extract: sc-364811, mouse ileum tissue extract or mouse small intestine extract: sc-364252.

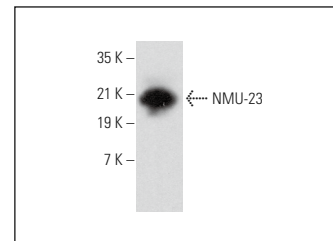
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



NMU-23 (A-5): sc-398600. Western blot analysis of NMU-23 expression in mouse small intestine (A) and rat small intestine (B) tissue extracts. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.



NMU-23 (A-5): sc-398600. Western blot analysis of NMU-23 expression in mouse ileum tissue extract.

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 for detailed protocols and support products.