

# NMUR1 (M-53): sc-135160

## BACKGROUND

Neuromedin U is a neuropeptide with high activity on smooth muscle. It is widely expressed in gastrointestinal systems and central nervous system (CNS). Peripheral activities of neuromedin U include smooth muscle stimulation, ion transport alterations in the gut and the regulation of local blood flow and adrenocortical function. Neuromedin U receptors 1 and 2 (NMUR1 and NMUR2) are multi-pass membrane proteins that belong to the G-protein coupled receptor 1 family of proteins. Both NMUR1 and NMUR2 act as receptors for the neuromedin U neuropeptide. NMUR1 is detected in peripheral organs, particularly in urogenital and gastrointestinal systems, with highest levels in testes. Its expression in CNS is low, but the protein has been detected in cerebellum, hippocampus, dorsal root ganglia and spinal cord. NMUR2 is predominantly detected in central nervous system with highest levels detected in medulla oblongata, spinal cord and thalamus. It may also be detected in testes but has low levels of expression in peripheral tissues.

## REFERENCES

- Bhattacharyya, S., et al. 2004. Studies of the neuromedin U-2 receptor gene in human obesity: evidence for the existence of two ancestral forms of the receptor. *J. Endocrinol.* 183: 115-120.
- Brighton, P.J., et al. 2004. Signaling and ligand binding by recombinant neuromedin U receptors: evidence for dual coupling to  $G\alpha_{q/11}$  and  $G\alpha_i$  and an irreversible ligand-receptor interaction. *Mol. Pharmacol.* 66: 1544-1556.
- Aiyar, N., et al. 2004. Radioligand binding and functional characterization of recombinant human NmU1 and NmU2 receptors stably expressed in clonal human embryonic kidney-293 cells. *Pharmacology* 72: 33-41.
- Gartlon, J., et al. 2004. Localisation of NMU1R and NMU2R in human and rat central nervous system and effects of neuromedin-U following central administration in rats. *Psychopharmacology* 177: 1-14.
- Brighton, P.J., et al. 2004. Neuromedin U and its receptors: structure, function, and physiological roles. *Pharmacol. Rev.* 56: 231-248.
- Qiu, D.L., et al. 2005. Neuromedin U receptor-2 mRNA and HCN channels mRNA expression in NMU-sensitive neurons in rat hypothalamic paraventricular nucleus. *Neurosci. Lett.* 374: 69-72.

## CHROMOSOMAL LOCATION

Genetic locus: *Nmur1* (mouse) mapping to 1 D.

## SOURCE

NMUR1 (M-53) is a rabbit polyclonal antibody raised against amino acids 85-137 mapping within an internal region of NMUR1 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

NMUR1 (M-53) is recommended for detection of NMUR1 of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 NMUR1 siRNA (h): sc-61209, NMUR1 siRNA (m): sc-61210, NMUR1 shRNA Plasmid (h): sc-61209-SH, NMUR1 shRNA Plasmid (m): sc-61210-SH, NMUR1 shRNA (h) Lentiviral Particles: sc-61209-V and NMUR1 shRNA (m) Lentiviral Particles: sc-61210-V.

Molecular Weight of NMUR1: 47 kDa.

Positive Controls: mouse testis extract: sc-2405.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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](http://www.scbt.com) or our catalog for detailed protocols and support products.