

# NCU-G1 (Q-20): sc-242160

## BACKGROUND

Lysosomal membrane possess multiple important functions such as lysosomal matrix acidification, control of lysosomal enzymes, mediation of the interaction between lysosomes and other organelles, and transport of degradation products to the cytoplasm. Lysosomal membrane proteins are normally highly glycosylated and consist of approximately 40 members. Lysosomal protein NCU-G1 is a 404 amino acid single-pass type I membrane protein that is widely expressed, with highest expression in kidney. In humans, NCU-G1 is thought to function as a co-activator for ligand-activated PPAR $\alpha$ , a nuclear hormone receptor. Murine NCU-G1 is encoded by a gene located on mouse chromosome 3 F1.

## REFERENCES

1. Kawamura, T., et al. 2001. cDNA of a novel mRNA expressed predominantly in mouse kidney. *Biochem. Genet.* 39: 33-42.
2. Carninci, P., et al. 2005. The transcriptional landscape of the mammalian genome. *Science* 309: 1559-1563.
3. Saftig, P. 2006. Physiology of the lysosome. *Fabry Disease: Perspectives from 5 Years of FOS.* Oxford: Oxford PharmaGenesis: Chapter 3.
4. Steffensen, K.R., et al. 2007. Human NCU-G1 can function as a transcription factor and as a nuclear receptor co-activator. *BMC Mol. Biol.* 8: 106.
5. Schieweck, O., et al. 2009. NCU-G1 is a highly glycosylated integral membrane protein of the lysosome. *Biochem. J.* 422: 83-90.
6. Saftig, P. and Klumperman, J. 2009. Lysosome biogenesis and lysosomal membrane proteins: trafficking meets function. *Nat. Rev. Mol. Cell Biol.* 10: 623-635.
7. Schröder, B.A., et al. 2010. The proteome of lysosomes. *Proteomics* 10: 4053-4076.

## CHROMOSOMAL LOCATION

Genetic locus: 0610031J06Rik (mouse) mapping to 3 F1.

## SOURCE

NCU-G1 (Q-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NCU-G1 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.

Blocking peptide available for competition studies, sc-242160 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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.

## APPLICATIONS

NCU-G1 (Q-20) is recommended for detection of NCU-G1 of mouse and rat 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).

NCU-G1 (Q-20) is also recommended for detection of NCU-G1 in additional species, including porcine.

Suitable for use as control antibody for NCU-G1 siRNA (m): sc-149860, NCU-G1 shRNA Plasmid (m): sc-149860-SH and NCU-G1 shRNA (m) Lentiviral Particles: sc-149860-V.

Molecular Weight of glycosylated NCU-G1: 75 kDa.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.