

# Neu1 (H-300): sc-32936

## BACKGROUND

Neu1 encodes the lysosomal enzyme neuraminidase, Neu1, which cleaves terminal sialic acid residues from substrates such as glycoproteins and glycolipids. In the lysosome Neu1 belongs to a heterotrimeric complex containing  $\beta$ -galactosidase and cathepsin A (also referred to as "protective protein"). In humans, primary or secondary deficiency of this enzyme leads to two clinically similar neurodegenerative lysosomal storage disorders: sialidosis and galactosialidosis (GS). Sialidosis symptoms range from eye abnormalities and neurological disturbances to skeletal malformations, mental retardation and early death. Neu1 is expressed in the pancreas, muscle, kidney, placenta, heart, lung and liver. The human Neu1 gene maps to chromosome 6p21.33 and encodes a lysosomal protein localized on the inner side of the plasma membrane and in intracellular vesicles. Neu1 is also known as  $\alpha$ -N-acetylneuraminidase and Acetylneuraminyl hydrolase.

## CHROMOSOMAL LOCATION

Genetic locus: NEU1 (human) mapping to 6p21.33; Neu1 (mouse) mapping to 17 B1.

## SOURCE

Neu1 (H-300) is a rabbit polyclonal antibody raised against amino acids 116-415 mapping at the C-terminus of Neu1 of human origin.

## PRODUCT

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

## 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

Neu1 (H-300) is recommended for detection of Neu1 of mouse, rat and 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).

Neu1 (H-300) is also recommended for detection of Neu1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Neu1 siRNA (h): sc-106297, Neu1 siRNA (m): sc-149919, Neu1 shRNA Plasmid (h): sc-106297-SH, Neu1 shRNA Plasmid (m): sc-149919-SH, Neu1 shRNA (h) Lentiviral Particles: sc-106297-V and Neu1 shRNA (m) Lentiviral Particles: sc-149919-V.

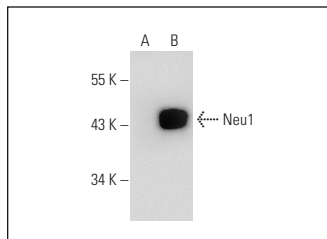
Molecular Weight of Neu1: 45 kDa.

Positive Controls: Neu1 (h): 293T Lysate: sc-171286 or Hep G2 cell lysate: sc-2227.

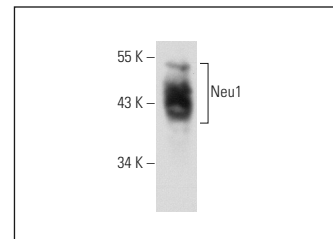
## RECOMMENDED SECONDARY REAGENTS

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.

## DATA



Neu1 (H-300): sc-32936. Western blot analysis of Neu1 expression in non-transfected: sc-117752 (A) and human Neu1 transfected: sc-171286 (B) 293T whole cell lysates.



Neu1 (H-300): sc-32936. Western blot analysis of Neu1 expression in Hep G2 whole cell lysate.

## SELECT PRODUCT CITATIONS

- Amith, S.R., et al. 2009. Dependence of pathogen molecule-induced toll-like receptor activation and cell function on Neu1 sialidase. *Glycoconj. J.* 26: 1197-1212.
- Rusciani, A., et al. 2010. Elastin peptides signaling relies on neuraminidase-1-dependent lactosylceramide generation. *PLoS ONE* 5: e14010.
- Jayanth, P., et al. 2010. Neu1 sialidase and matrix metalloproteinase-9 cross-talk is essential for neurotrophin activation of Trk receptors and cellular signaling. *Cell. Signal.* 22: 1193-1205.
- Abdulkhalek, S., et al. 2011. Neu1 sialidase and matrix metalloproteinase-9 cross-talk is essential for Toll-like receptor activation and cellular signaling. *J. Biol. Chem.* 286: 36532-36549.
- Chen, G.Y., et al. 2014. Broad and direct interaction between TLR and Siglec families of pattern recognition receptors and its regulation by Neu1. *Elife* 3: e04066.

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Try **Neu1 (F-8): sc-166824**, our highly recommended monoclonal alternative to Neu1 (H-300).