

Datasheet for 600-401-850**Neuraminidase Antibody****Overview**

Description:	Anti-Neuraminidase (Neu2) (RABBIT) Antibody - 600-401-850
Item No.:	600-401-850
Size:	100 µg
Applications:	ELISA, WB
Reactivity:	Human
Host Species:	Rabbit

Product Details

Background:	Neuraminidases or sialidases are exoglycosidases that catalyze the cleavage of α-glycosidically linked terminal N-acetyl neuraminic acid from sialylated glycoconjugates. They are widely spread in nature, occurring in viruses, bacteria, fungi, protozoa, birds and mammals. Together, the neuraminidases form a family of hydrolases that share a conserved active site and similar sequence motifs. Three types of neuraminidase are found in mammals and are defined as lysosomal, plasma membrane and cytosolic on the basis of their biochemical properties and subcellular distribution. Lysosomal N-acetyl-α-neuraminidase (NEU1) has significant primary structure characteristics of other mammalian and microbial sialidases with similar substrate specificity. However, unlike other members of this family, lysosomal neuraminidase requires the carboxypeptidase protective protein/cathepsin A (PPCA) for intracellular transport and lysosomal activation. The enzyme is only catalytically active when it is bound to PPCA and is a component of a high molecular weight, multi-protein complex containing PPCA, β-galactosidase and N-acetylgalactosamine-6-sulfate sulfatase. Using a hamster Sial3 probe, Monti et al. (1999) identified the gene encoding sialidase-2, which they designated NEU2, from a human genomic library. The 2 putative exons of NEU2 encode a deduced 380-amino acid protein with a calculated molecular mass of 42.23 kD. The NEU2 protein has significant homology with the mammalian, viral, and bacterial sialidases. It shares over 72% similarity with the hamster and rat cytosolic sialidases and over 42% similarity with human NEU1. NEU2 contains a potential N-linked glycosylation site, 2 aspartic acid block consensus sequences, and an N-terminal F/YRIP sequence motif which is part of the active site of other sialidase enzymes. Monti et al. hypothesized that NEU2 has a cytosolic localization because it does not contain a cleavage site, transmembrane domain, or targeting motifs.
Synonyms:	rabbit anti-Neu2 antibody, rabbit anti-neuraminidase 2 antibody, Sialidase-2, Cytosolic sialidase, N-acetyl-alpha-neuraminidase-2, NEU-2, Neu 2
Host Species:	Rabbit

Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	NEU2
Reactivity:	Human
Immunogen Type:	Conjugated Peptide
Immunogen:	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an internal portion near aa 100-125 of Human Neu2.
Purity/Specificity:	This is an affinity purified antibody produced by immunoaffinity chromatography using the immunizing peptide after immobilization to a solid phase. This antibody reacts with human Neu2. Based on sequence we expect this antibody to react with neuraminidase from other sources, although specific reactivity has not been confirmed. Cross-reactivity against Neu1 has not yet been established. Neuraminidases are highly conserved in mammals and therefore cross reactivity is expected with mouse and rat Neu2.
Relevant Links:	• NCBI - 222352169 • UniProtKB - Q9Y3R4 • GenelD - 4759

Application Details

Tested Applications:	ELISA, WB
Application Note:	Anti-NEU2 Antibody is has been tested by western blot and ELISA and suitable for immunocytochemistry and immunoprecipitation, transfected cell culture, and primary cell culture. A single band of the expected apparent molecular weight (43 kDa) was observed at a 1:500 dilution incubated for 1 h at room temperature. A second lower molecular weight band may represent a truncated form of this protein. Neuraminidase is not very abundant in most tissues and its detection using this antibody may require further optimization. Researchers should determine optimal titers for other applications.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:10,000 - 1:50,000
IHC:	User Optimized
IP:	User Optimized

WB: 1:500- 1:2,000

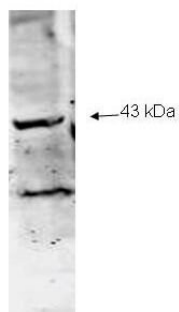
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	0.9 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

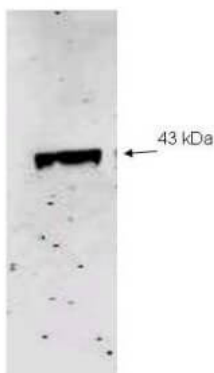
Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western Blot

Western blot analysis using Rockland Immunochemical's Affinity Purified anti-Neu2 antibody to detect Neu-2 present in a lysate expressing human Neu2 (1.0 ul loaded). Molecular weight marker (not shown) indicates a band of the expected MW (43 kDa). The reactive lower molecular weight band is believed to represent a truncated form of this protein. The blot was incubated with a 1:500 dilution of the antibody at room temperature for 1 h followed by detection using IRDye™800 labeled Goat-a-Rabbit IgG [H&L] (611-132-122) diluted 1:1,000. IRDye™800 fluorescence image was captured using the Odyssey® Infrared Imaging System developed by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar results.



Western Blot

Western blot analysis using Rockland Immunochemical's Affinity Purified anti-Neu2 antibody to detect recombinant His tagged Neu-2 (1.0 μ g loaded). Molecular weight marker (not shown) indicates a single band of the expected MW (43 kDa). The blot was incubated with a 1:500 dilution of the antibody at room temperature for 1 h followed by detection using IRDye800 labeled Goat-a-Rabbit IgG [H&L] (611-132-122) diluted 1:1,000. IRDye800 fluorescence image was captured using the Odyssey[®] Infrared Imaging System developed by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar results.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.