Datasheet for ABIN964880

anti-NEU1 antibody (Internal Region)

2 Images

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Overview

Quantity:	100 µg
Target:	NEU1
Binding Specificity:	Internal Region
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This NEU1 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunoprecipitation (IP)

Product Details

Immunogen:	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids 110-124 of Human Neu2. Immunogen Type: Peptide
Isotype:	IgG
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.
Characteristics:	Neuraminidases or sialidases are exoglycosidases that catalyze the cleavage of alpha-

Product Details

	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-alpha-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, ß-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.
Sterility:	Sterile filtered

Target Details

Target:	NEU1
Alternative Name:	Neuraminidase (NEU1 Products)
Target Type:	Influenza Protein
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

Target Details

	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, ß-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: Acetylneuraminyl hydrolase antibody, G9 sialidase antibody, Lysosomal sialidase antibody, N acetyl alpha neuraminidase 1 antibody, NANH antibody, Neu 1 antibody
Gene ID:	4759, 222352169
UniProt:	Q9Y3R4
Pathways:	SARS-CoV-2 Protein Interactome

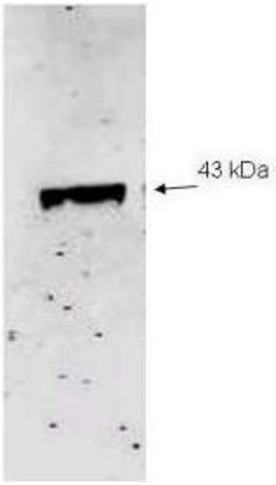
Application Details

Application Notes:	This antibody is suitable for western blotting, immunocytochemistry, immunoprecipitation, transfected cell culture, primary cell culture, and ELISA. 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.
Comment:	Gene Name: NEU2
Restrictions:	For Research Use only

Handling

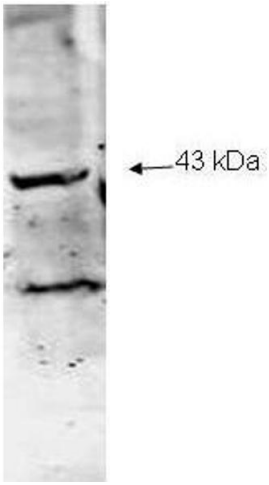
Format:	Liquid
Concentration:	0.9 mg/mL
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	Sodium azide
Precaution of Use:	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C/-20 °C
Storage Comment:	Store vial at 4 °C prior to restoration. For extended storage aliquot contents and freeze at -20 °C or below. 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 date is one (1) year from date of opening.
Expiry Date:	12 months

Images



Western Blotting

Image 1. Western blot analysis using Immunochemical's Affinity Purified anti-Neu2 antibody to detect recombinant His tagged Neu-2 (1.0 ?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] diluted 1:1,000. IRDye800 fluorescence image was captured using the Infrared Imaging System developed by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar results.



Western Blotting

Image 2. Western blot analysis using Immunochemical's Affinity Purified anti-Neu2 antibody to detect Neu-2 present in a lysate expressing human Neu2 (1.0 ?l 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 using800 labeled Goat-a-Rabbit IgG [H&L] diluted 1:1,000.800 fluorescence image was captured using the Infrared Imaging System developed by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar results.

