Datasheet for ABIN117994

anti-NEU2 antibody (AA 110-124)

2 Images

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Overview

Quantity:	0.1 mg
Target:	NEU2
Binding Specificity:	AA 110-124
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This NEU2 antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF), Immunoprecipitation (IP), Enzyme Immunoassay (EIA), Immunohistochemistry (Frozen Sections) (IHC (fro))

Product Details

Immunogen:	Synthetic peptide corresponding to amino acids 110-124 of Human Neu2.
Sequence:	T-E-Q-Q-Q-L-Q-T-R-A-N-V-T-R-L
Specificity:	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.
Purification:	Immunoaffinity Chromatography.

Target Details

Target:	NEU2

Target Details

Alternative Name:	Sialidase-2 (NEU2 Products)
Background:	Neuraminidases or sialidases are exoglycosidases that catalyze the cleavage of ?-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-cetylneuraminidase (NEU1) has significant primary structurecharacteristics 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: Cytosolic sialidase, N-acetyl-alpha-neuraminidase 2, NEU2
Gene ID:	4759
NCBI Accession:	NP_005374
UniProt:	Q9Y3R4
Pathways:	Regulation of Muscle Cell Differentiation, Skeletal Muscle Fiber Development

Application Details

Application Notes:	This antibody is suitable for Western blotting, Immunocytochemistry,Immunoprecipitation, transfected cell culture, primary cell culture, Immunohistochemistryon Frozen Sections and ELISA. Recommended Dilutions: This product was assayed by ELISA against 0.1 g of

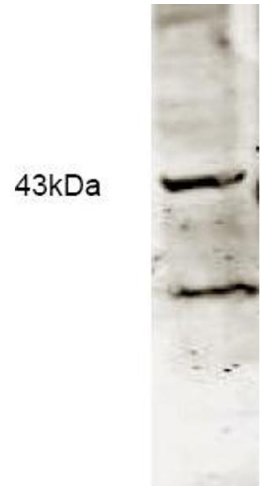
Application Details

	theimmunizing peptide. A 1: 2,000 to 1: 10,000 dilution of the antibody is recommended forthis assay. This product was assayed on immunoblot against both recombinant protein and an E. colilysate expressing Neu-2. 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 lowermolecular weight band may represent a truncated form of this protein. Neuraminidase isnot very abundant in most tissues and its detection using this antibody may require furtheroptimization. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Restrictions:	For Research Use only

Handling

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, 0.01 % Sodium Azide
Preservative:	Sodium azide
Precaution of Use:	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Handling Advice:	Dilute only prior to immediate use. Avoid cycles of freezing and thawing.
Storage:	-20 °C
Storage Comment:	Store vial at -20 °C or below prior to opening. Aliquot contents and freeze at -20 °C or below.

Images



Western Blotting

Image 1. Western blot analysis using 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] 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 Blotting

Image 2. Western blot analysis using Rockland Immunochemical's Affinity Purified anti-Neu2 antibody to detect recombinant His tagged Neu-2 (1.0 ug 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 IRDye™800 labeled Goat-a-Rabbit IgG [H&L] 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.