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KRISHZYME™ α2-3,6,8,9 Neuraminidase

REF : KPGF-005

Ver 2.0

RIUO

RIUO	**For Research & Industrial Use Only**	**REF**	**Catalog Number**
	**Store At**	**LOT**	**Batch Code**
	**Manufactured By**		**Biological Risk**
	**Expiry Date**		**Consult Operating Instructions**

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REF **KPGF-004**

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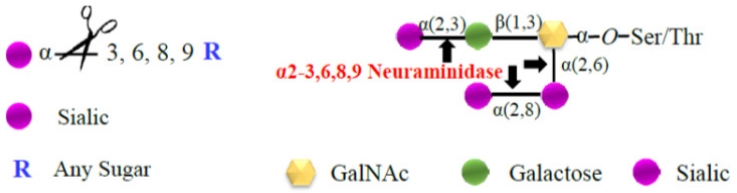
Product Description:

Neuraminidase is the common name for Acetyl-neuraminyl hydrolase (Sialidase). α2-3,6,8,9 Neuraminidase is a broad specificity sialidase, which cleaves linear and branched non-reducing terminal sialic acid residues from glycoproteins, glycopeptides, and oligosaccharides. It can be used for glycan analysis and characterization and intact glycoprotein remodeling, in vitro and in vivo.

KRISHZYME™ α2-3,6,8,9 Neuraminidase is a recombinant glycosidase cloned from Arthrobacter ureafaciens and expressed in E. coli. The enzyme releases α(2,3)-, α(2,6)-, α(2,8)-, and α(2,9)-linked N-acetylneuraminic acid from complex carbohydrates. The initial rate of hydrolysis of α(2,6) linkages is reported to be approximately twice that of α(2,3)-linked sialic acid, however, in practice, this kinetic selectivity is of little consequence during extended incubations. Effective digestion of glycolipid substrates is facilitated by addition of a detergent, such as sodium taurodeoxycholate to the incubation.



The enzyme releases α(2,3)-, α(2,6)-, α(2,8)-, and α(2,9)-linked N-acetylneuraminic acid from complex carbohydrates.

Product Size:

Catalog Number	Pack Size	Concentration
KPGF-005-A	0.6 U / 30 ul	20 U /ml
KPGF-005-B	5 x 0.6 U / 30 ul	

Physical Form:

KRISHZYME™ alpha2-3,6,8,9 Neuraminidase is supplied as a liquid in 20mM Tris-HCl (pH 7.5 at 25°C), 50 mM NaCl , 1mM EDTA at a concentration of 20 U/ml.

Reagents Supplied:

The following reagents are supplied with this product:

Composition	Formula	Concentration
Assay Buffer 1	50 mM CaCl2, 500 mM sodium acetate, pH 5.5 at 25°C	10X

Product Source:

Recombinant gene cloned from Arthrobacter ureafaciens and expressed in E.coli. Krishzyme™ α2-3,6,8,9 Neuraminidase has a molecular weight of 66kDa.

Product Quality:

≥95% purity, as determined by SDS-PAGE. No other exoglycosidase, endoglycosidase, and protease activity were contaminated.

Unit Definition:

One unit is defined as the amount of enzyme required to catalyze the release of 1 umole of p-nitrophenol from p-nitrophenyl-α-D-N-acetylneuraminic acid per minute at 37° C, pH 5.5.

Storage Temperature:
Store at 4°C, in a frost free refrigerator

Characteristic:

- Recombinant enzyme with no detectable endoglycosidase or other exoglycosidases contaminating activities
- ≥95% purity, as determined by SDS-PAGE
- Optimal activity and stability for up to 24months
- Can be used under native or denaturing conditions
- Acts on both Neu5Ac and Neu5Gc
- Double digest with other exoglycosidases and endoglycosidases
- Tolerant of moderate levels (0.5-1.0%) of detergents

Applications:

- Structural analysis of oligosaccharides
- Determining sialic acid linkage
- Glycoprotein deglycosylation
- Removing heterogeneity from glycoproteins

Suggestions for Use:

1) Combine 1-100 ug of glycoprotein and H2O (if necessary) in a total reaction volume of 8 ul;
2) Add 1 ul of 10X Assay Buffer 1 to make a 10 ul total reaction volume;
3) Add 1 ul alpha2-3,6,8,9 Neuraminidase, mix gently ;
4) Incubate at 37°C for 1 hour.

Notes :

- The amount of exoglycosidase enzyme required varies when different substrates are used. Start with 1-2 ul for 1-100ug of glycoprotein for one hour in a 10-25 µl reaction. If there is still undigested material, let the reaction go overnight;
- The reaction can be scaled up linearly;
- Higher concentrations of enzyme as well as longer incubation times may be necessary for cleavage of branched structures.

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