

## PRODUCT INFORMATION

**Catalog Number:** EC-32118-1

**Description:** Neuraminidase from *Arthrobacter ureafaciens*, 1U

**Synonyms:** Sialidase, Acylneuraminyl Hydrolase (EC 3.2.1.18)

**Lot Number:**

**Package Size:** 1 unit Neuraminidase / vial.

**Molecular Weight:** ~ 52,000, 66,000 and 88,000 as determined by gel filtration and SDS-PAGE.

**pH:** Optimum between 4.5-5.5 using NAN-Lac as a substrate. Stable between 4.5-9.5.

**Thermal Stability:** Below 60°C at pH 5.0, 20 minutes.

**Specificity:** The  $\alpha$ -ketosidic linkage of N-glycolylneuraminic acid (NGNA) will be hydrolyzed as well as that of NANA. This enzyme cleaves the  $\alpha(2,3)$ ,  $\alpha(2,6)$  and  $\alpha(2,8)$  linkages of N-acetylneuraminic acid. Activity is independent of  $\text{Ca}^{2+}$  and is not inhibited by EDTA, in contrast to *Vibrio cholerae* neuraminidase. Activity is not, or is only slightly, inhibited by monoiodoacetate, p-chloromecuribenzoate, and  $\text{HgCl}_2$ , which is in contrast to *Clostridium perfringens* neuraminidase.

**Purity:** The following enzyme activities are not detected:

$\alpha$ - and $\beta$ -glucosidase	N-acetyl $\alpha$ -glucosaminidase
$\alpha$ - and $\beta$ -galactosidase	N-acetyl $\alpha$ -galactosaminidase
$\alpha$ -mannosidase	N-acetyl $\alpha$ -mannosaminidase
$\alpha$ -fucosidase	N-acetyl $\beta$ -glucosaminidase
Protease	N-acetyl $\beta$ -galactosaminidase
N-acetylneuraminic acid aldolase	N-acetyl $\beta$ -mannosaminidase

**Unit Definition:** One unit will liberate 1 $\mu$ mole of N-acetylneuraminic acid per minute at pH 5.0, 37°C.

**Storage:** Store lyophilized powder refrigerated at 5-8°C or frozen. Store liquid frozen in aliquots. Avoid freeze-thaw cycles. Clarify by centrifugation.

**Caution:** Refer to the enclosed MSDS for information regarding neuraminidase. The aluminum seals have sharp edges and the vial itself may have cracks which can cause lacerations. Use caution when opening the vial.

**EY LABORATORIES, INC.**  
107 North Amphlett Blvd.  
San Mateo, CA 94401

Tel: 650-342-3296  
Fax: 650-342-2648  
Orders: 1-800-821-0044  
(Outside CA only)

**EY LABORATORIES, INC.**  
107 North Amphlett Blvd.  
San Mateo, CA 94401

Tel: 650-342-3296  
Fax: 650-342-2648  
Orders: 1-800-821-0044  
(Outside CA only)

**MATERIAL SAFETY DATA SHEET**

Effective Date: March 31, 2006

Revision 5

Page 1 of 2

**PRODUCT IDENTIFICATION**

Name: Crude and purified protein and enzymes.  
 Catalog Number (s): P-01, 2402, 2404, EC-32118-1, EC-32118S, EC-32118-5, E-34424, EC-34424, BA-000, BA-002, NP-01 to NP-05, B-1201 to B-4601, L-1102 to L-9000, AT-2100 to AT-2701, AF-001 to AF-2354, AL-1104 to AL-4701, 13-600 to 13-607, DM1011P to DM1064P.  
 Formula: Complex polypeptides.  
 Synonyms: Protein A, Horseradish Peroxidase, Laminin (mouse), Neuraminidase, Bromelain, Avidin (egg white), Glycosylated Bovine Serum Albumin, Lectins, Secondary and Monoclonal Antibodies, other Antisera.

**EMERGENCY INFORMATION**

EY Laboratories, Inc.  
 107 North Amphlett Blvd.  
 San Mateo, CA 94401

**EMERGENCY PHONE:**  
**650-342-3296**

**HAZARDOUS COMPONENTS**

Specific protein (s) as listed on the vial label. Solutions are at a concentration generally greater than 0.5mg protein / ml. Powders are generally greater than 95% specific protein unless otherwise indicated on the vial label or product information sheet. Biological activity of these proteins will vary. Although these materials are not generally considered to be hazardous they may cause allergic responses in sensitive individuals if inhaled or allowed to contact skin.

**HEALTH HAZARD INFORMATION**

EXPOSURE LIMITS: None established. The toxicological properties of these products have not been thoroughly investigated. Care should be taken when handling any of these materials.  
 EFFECTS OF OVEREXPOSURE: Any of these proteins may cause acute localized eye, skin, or mucous membrane irritation. Some sensitive individuals may develop a chronic allergic reaction with exposure.  
 ROUTES OF EXPOSURE: Inhalation of powders and skin contact with liquids are the primary routes of exposure. Care should be taken to avoid the formation of aerosols when handling any of the solutions.

**PHYSICAL CHARACTERISTICS**

APPEARANCE: Powders may be white to amber brown in color. Solutions may be translucent to a clear brown  
 SOLUBILITY: Powders are completely soluble in many biological buffers. Some are soluble in water. All liquids are completely miscible in water and biological buffers

**FIRE AND EXPLOSION HAZARDS**

EXTINGUISHING MEDIA: Not considered to be a fire hazard.  
 SPECIAL FIRE FIGHTING PRECAUTIONS: Water spray or CO<sub>2</sub>.  
 None required.

NOTE: Most solutions contain 0.05% sodium azide as a preservative. Azide may react with lead and copper plumbing to form explosive metal azides. Flush with copious amounts of water when disposing material in the sink.

**REACTIVITY DATA**

STABILITY: Stable. Decomposition products are not known to be hazardous.  
 HAZARDOUS POLYMERIZATION: Will NOT occur.  
 INCOMPATIBILITY: None known. (Lead and copper may react with sodium azide).

**SPILL / LEAK PROCEDURES**

MATERIAL RELEASE / SPILL: Avoid contact with powder or liquid. Clean up spill with a paper towel soaked in household bleach. Do not allow solutions to dry on environmental surfaces. Wash affected area with detergent after the area has been treated with bleach.  
 WASTE DISPOSAL: Incinerate, autoclave, or dispose of paper waste in accordance with all Local, State, and Federal regulations. Due to the small quantities of material involved these products are generally not considered to be environmental hazards. All of these proteins are fully biodegradable.

**EMERGENCY FIRST AID PROCEDURES**

May be harmful if swallowed, inhaled, or allowed to absorb through the skin. Wash contacted area with water for 15 minutes. If inhaled remove to fresh air. Report exposure to the appropriate safety official. Consult a physician if irritation occurs or if there is any indication of an allergic response such as watering eyes, sneezing, or difficulty breathing

**SPECIAL HANDLING PRECAUTIONS**

VENTILATION: No special ventilation is required but it is recommended to handle these reagents in a fume hood when possible.  
 EYE PROTECTION: Not required under most circumstances but recommended as a safety precaution.  
 RESPIRATORY PROTECTION: Recommended as a safety precaution, specifically when working with powders. An approved respirator may be required for those individuals already known to be sensitive to these materials.  
 PROTECTIVE GLOVES: Required when handling any of these materials.

**SPECIAL PRECAUTIONS**

This material is for research and experimental application only. It is not intended for food, drug, household, agricultural, or cosmetic use. All materials should be handled only by technically qualified individuals experienced with working with potentially hazardous chemicals. The above information is correct to the best of our knowledge. The user should make independent decisions regarding completeness of the information, based on all sources available. EY Laboratories, Inc. shall not be held liable for any damage resulting from handling or contact with the above product.

**EY LABORATORIES, INC.**

107 North Amphlett Blvd.  
 San Mateo, CA 94401

Tel: 650-342-3296  
 Fax: 650-342-2648  
 Orders: 1-800-821-0044  
 (Outside CA only)

**EY LABORATORIES, INC.**

107 North Amphlett Blvd.  
 San Mateo, CA 94401

Tel: 650-342-3296  
 Fax: 650-342-2648  
 Orders: 1-800-821-0044  
 (Outside CA only)

Sample Only