list labs
540 Division Street, Campbell, California 95008-6906
Tel. (408) 866-6363 Fax (408) 866-6364
www.listlabs.com

Product #122
Lot #1224A2
Release Date: April 2018

CERTIFICATE OF ANALYSIS
STAPHYLOCOCCAL ENTEROTOXIN TYPE B
from *Staphylococcus aureus*
Lot #1224A2

New Formulation

Contents

Each vial contains 0.5 mg of Staphylococcal Enterotoxin Type B (SEB). When reconstituted with 0.5 mL water, the buffer is 0.014 M Sodium Phosphate, 0.004 M Potassium Phosphate, pH 6.8. **Handle the product gently; do not vortex.**

Concentration

Protein concentration was determined by absorbance at 277 nm using an extinction coefficient of 1.44 for a 1 mg/ml solution.[1]

Purity

When examined on 12% SDS-polyacrylamide gels, this protein migrates as a single major band with an apparent molecular weight of approximately 28,000 daltons. Densitometric analysis estimates the purity of the product as ≥ 95%.

Cytotoxicity of the SEB was assessed by measuring the stimulation of human IFN-gamma in peripheral blood mononuclear cells (PBMC) after exposure to the SEB. Cytotoxicity was detected at the lowest concentration assayed, 0.02 ng/ml SEB.

The endotoxin content, determined using a kinetic chromogenic LAL assay, is approximately 3 EU/mg.

Toxicity

The emetic dose 50% in animals is approximately 1 µg/kg intragastrically, and 0.1 to 0.5 µg/kg intravenously.[2] Humans are more sensitive, and it is estimated that 2 – 3 ng/kg causes illness. It has been estimated that inhalation of less than 1 ng/kg SEB can incapacitate more than 50% of exposed humans, and that the inhalation LD_{50} in humans may be as low as 20 ng/kg SEB.[3] This product is a select agent.

Packaging/Storage

This preparation is provided as an aseptically lyophilized powder that has been stoppered under vacuum. Prior to reconstitution, it should be stored at 2 – 8°C.

(continued)

Handling

Good laboratory technique should be employed in the safe handling of this product. This involves observing the following practices:

1. Persons handling this product and contaminated glassware should consult the current version of the Biosafety in Microbiological and Biomedical Laboratories, BMBL.[3]

2. It is recommended to decontaminate the SEB with ≥10% Clorox for ≥30 minutes; autoclave decontamination is not always effective.[3]

3. This product is to be used by skilled personnel under the direction of a principal investigator in an appropriate laboratory.

4. Wear appropriate laboratory attire including lab coat, gloves and safety glasses. Nitrile gloves are recommended when handling lyophilized material.

5. Because this product is stoppered under vacuum, it is recommended to reconstitute the contents using a syringe in a biological safety cabinet. Never work with the product in the powdered form. Always reconstitute it first.

6. Do not mouth pipette, inhale, ingest or allow to come into contact with open wounds. Wash thoroughly any area of the body which comes into contact with the product.

7. Avoid accidental autoinoculation by exercising extreme care when handling in conjuction with any injection device.

8. This product is intended for research purposes by qualified personnel. It is not intended for use in humans or as a diagnostic agent. List Biological Laboratories, Inc. is not liable for any damages resulting from the misuse or handling of this product.

FOR RESEARCH PURPOSES ONLY. NOT FOR HUMAN USE

References

1. Iandolo, J.J and Tweten, R.K. (1988) *Meth. Enzymol.* **165**, 43 – 52.

2. Bergdoll, M.S. (1988) *Meth. Enzymol.* **165**, 324 – 333.

3. Biosafety in Microbiological and Biomedical Laboratories. U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institutes of Health.

QA/QC: VdK Date: 03NOV2020

Made in U.S.A.