

CERTIFICATE OF ANALYSIS  
MAPKKide® Plus (AMC)  
Specific Substrate for Anthrax Lethal Factor  
Lot #5321A1

**Contents**

Each vial of MAPKKide® Plus\* (AMC), a substrate specific for Anthrax Lethal Factor (LF), contains 100 nmoles of lyophilized peptide. MAPKKide® Plus\* (AMC) is a short peptide containing 7-amido-4-methylcoumarin (AMC). This lyophilized powder is stoppered under vacuum.

\* Patent pending

**Reconstitution**

A small amount of peptide has been lyophilized in each vial. During lyophilization and transportation, this material may be distributed throughout the vial. Since it is common practice to reconstitute peptide in a small volume of solvent, visually locate the powder and, if necessary, shake it to the bottom of the vial prior to adding the solvent. It is recommended that initial stock solutions be made in DMSO to ensure total recovery of the lyophilized peptide. Cover the vial with foil to protect from light.

**Concentration**

Peptide content is obtained from nitrogen determination.

**Analysis**

The peptide is ≥95% pure as determined by reverse phase HPLC. The expected molecular weight was obtained by mass spectrometry.

**Assay Conditions**

The protocol for quantitative detection of anthrax lethal factor (LF) in plasma using MAPKKide® Plus\* (AMC), Product #532 is attached. The procedure for the specific detection of active infection by *Bacillus anthracis* in plasma is described. This fluorescently labeled peptide substrate, MAPKKide® Plus\* (AMC), is specific for anthrax lethal factor (LF) and resistant to cleavage by nonspecific proteases found in plasma. MAPKKide® Plus\* (AMC) is highly sensitive to LF and may be used to detect early infections. Two methods for the detection of LF in plasma using this fluorogenic substrate are described: an HPLC-based assay and a microplate assay.

The HPLC-based assay is described in "Substrates for Specific and Quantitative Detection of Anthrax Lethal Factor in Plasma" which is posted on the List Biological Laboratories, Inc. website: [www.listlabs.com](http://www.listlabs.com), under Product #532.

**Handling**

Good laboratory technique should be employed in the safe handling of this product. Wear appropriate laboratory attire including lab coat, gloves and safety glasses. Nitrile gloves are recommended when handling lyophilized material.

The 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.

QA/QC: KPD Date: 01/22/2021