

## New England Biolabs Certificate of Analysis

**Product Name:** *dam Methyltransferase*  
**Catalog Number:** M0222S  
**Concentration:** 8,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to protect 1 µg Lambda (*dam*-) DNA in 1 hour at 37°C in a total reaction volume of 10 µl against cleavage by MboI restriction endonuclease.  
**Packaging Lot Number:** 10145033  
**Expiration Date:** 12/2023  
**Storage Temperature:** -20°C  
**Storage Conditions:** 50 mM Tris-HCl, 50 mM KCl, 10 mM EDTA, 1 mM DTT, 200 µg/ml BSA, 50% Glycerol, (pH 7.5 @ 25°C)  
**Specification Version:** PS-M0222S/L v2.0

dam Methyltransferase Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0222SVIAL	dam Methyltransferase	10132680	Pass
B9003SVIAL	S-adenosylmethionine (SAM)	10131977	Pass
B0222SVIAL	dam Methylase Buffer	10134742	Pass

Assay Name/Specification	Lot # 10145033
<b>Functional Testing (Methyltransferase)</b> A 10 µl reaction in dam Methyltransferase Reaction Buffer supplemented with 80 µM SAM containing 1 µg of Lambda <i>dam</i> - DNA and 1 unit of dam Methyltransferase incubated for 1 hour at 37°C followed by heat inactivation results in ≥ 95% protection from digestion with 10 units of MboI in NEBuffer 3 with 10 mM MgCl <sub>2</sub> incubated at 37°C for 1 hour as determined by agarose gel electrophoresis.	Pass
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in NEBuffer 2 containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> H] E. coli DNA and a minimum of 80 units of dam Methyltransferase incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
<b>Non-Specific DNase Activity (16 Hour)</b> A 50 µl reaction in NEBuffer 2 containing 1 µg of HindIII digested Lambda DNA and a minimum of 80 units of dam Methyltransferase incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass

This product has been tested and shown to be in compliance with all specifications.

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23 Mar 2022



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23 Mar 2022