

## 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 Mbol restriction endonuclease.*  
**Packaging Lot Number:** *10207565*  
**Expiration Date:** *05/2025*  
**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	10190576	Pass
B9003SVIAL	S-adenosylmethionine (SAM)	10210241	Pass
B0222SVIAL	dam Methylase Buffer	10178451	Pass

Assay Name/Specification	Lot # 10207565
<p><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 &lt;0.1% of the total radioactivity.</p>	Pass
<p><b>Functional Testing (Methyltransferase)</b>            A 10 µl reaction in dam Methyltransferase Reaction Buffer supplemented with 80 µM SAM containing 1 µg of Lambda dam- 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 Mbol in NEBuffer 3 with 10 mM MgCl<sub>2</sub> incubated at 37°C for 1 hour as determined by agarose gel electrophoresis.</p>	Pass
<p><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.</p>	Pass

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

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit [www.neb.com/trademarks](http://www.neb.com/trademarks) for additional information.

  
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16 May 2023

  
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20 Dec 2023