

For life science research only.  
Not for use in diagnostic procedures.



# DNA Molecular Weight Marker V

 **Version: 07**

Content Version: August 2021

Fragment sizes: 8 to 587 bp  
pBR322 DNA × Hae III

**Cat. No. 10 821 705 001**    50 µg  
   200 µl  
   50 gel lanes

**Store the product at –15 to –25°C.**

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# 1. General Information

## 1.1. Contents

Vial / bottle	Label	Function / description	Content
1	DNA Molecular Weight Marker V	<ul style="list-style-type: none"> <li>Ready-to-use solution in 10 mM Tris-HCl, 1 mM EDTA, pH 8.0, (250 µg/ml).</li> <li>50 µg corresponds to 1 <math>A_{260}</math> unit.</li> </ul>	1 Vial, 50 µg (200 µl)

## 1.2. Storage and Stability

### Storage Conditions (Product)

When stored at  $-15$  to  $-25^{\circ}\text{C}$ , the product is stable through the expiry date printed on the label.

Vial / bottle	Label	Storage
1	DNA Molecular Weight Marker V	Store at $-15$ to $-25^{\circ}\text{C}$ . After thawing, store at $+2$ to $+8^{\circ}\text{C}$ . <b>⚠ Avoid repeated freezing and thawing.</b>

## 1.3. Application

Use DNA Molecular Weight Marker V as a size standard for DNA in agarose gels.

# 2. How to Use this Product

## 2.1. Before you Begin

### General Considerations

#### Size distribution

Fragment mixture prepared by cleavage of pBR322 DNA with restriction endonuclease Hae III. The mixture contains 22 DNA fragments with the following base pair lengths (1 base pair = 660 daltons).

**i** *Fragment lengths are derived from computer analysis of the pBR322 sequence.*

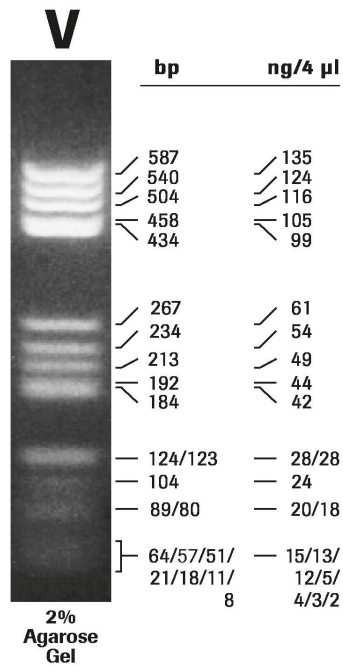
bp
587 540 504 458 434 267 234 213 192 184 124 123 104 89 80 64 57 51 21 18 11 8

### 3. Results

#### Typical analysis

The DNA fragment mixture shows the typical pattern in agarose gel electrophoresis, see Figure 1.

- After gel electrophoresis of 1 µg of the fragment mixture in a 2% Agarose MP\* gel, 14 bands are visible.
- The DNA fragments smaller than 64 bp cannot be separated clearly due to their small size and will only be visible in overloaded gels.



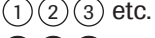



**Fig. 1:** Separation of 1 µg DNA Molecular Weight Marker V on a 2% Agarose MP gel, stained with ethidium bromide.

## 4. Supplementary Information

### 4.1. Conventions

To make information consistent and easier to read, the following text conventions and symbols are used in this document to highlight important information:

Text convention and symbols	
	<i>Information Note: Additional information about the current topic or procedure.</i>
	<b>Important Note: Information critical to the success of the current procedure or use of the product.</b>
	Stages in a process that usually occur in the order listed.
	Steps in a procedure that must be performed in the order listed.
* (Asterisk)	The Asterisk denotes a product available from Roche Diagnostics.

### 4.2. Changes to previous version

Layout changes.  
Editorial changes.

### 4.3. Trademarks

All product names and trademarks are the property of their respective owners.

### 4.4. License Disclaimer

For patent license limitations for individual products please refer to:  
**List of biochemical reagent products.**

### 4.5. Regulatory Disclaimer

For life science research only. Not for use in diagnostic procedures.

### 4.6. Safety Data Sheet

Please follow the instructions in the Safety Data Sheet (SDS).

### 4.7. Contact and Support

To ask questions, solve problems, suggest enhancements or report new applications, please visit our **Online Technical Support Site.**

To call, write, fax, or email us, visit **sigma-aldrich.com**, and select your home country. Country-specific contact information will be displayed.