

# Product Testing Report

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## Restriction Enzyme Stability Test

### Method

Aliquots of various restriction enzymes were subjected to the following five conditions:

- (a) storage at -20°C,
- (b) room temperature storage for **24** hours, followed by storage at -20°C,
- (c) room temperature storage for **48** hours, followed by storage at -20°C,
- (d) room temperature storage for **72** hours, followed by storage at -20°C and
- (e) room temperature storage for **7 days**, followed by storage at -20°C.

The Restriction Enzymes were subsequently used in standard digest reaction at 37°C for 30 minutes. The digested products were then run on a 1% agarose gel for the visualization of enzymatic activity.

Reactions were set up as shown below.

### Test 1:

- Plasmid used: pLenti-GIII-CMV-PDCD1-GFP-2A-Puro (Cat. No. LV257992)
- Enzymes tested:
  - AfIII            NcoI            EcoRV
  - Mlul (with KpnI as other enzyme)
  - NdeI (with XbaI as other enzyme)
  - XbaI (with NdeI as other enzyme)

Reaction Set up	Volume
Plasmid DNA (0.5 µg/µl)	2.0 µl
10X Universal Buffer	2.0 µl
Enzyme Tester	0.5 µl
Other Enzyme (if applicable)	0.5 µl
Water	15.0 µl
<b>Total</b>	<b>20.0 µl</b>

### Test 2:

- Plasmid used: pLenti-III-HA (Cat. No. LV022)
- Enzymes tested:
  - Sall (with AvrII as the other enzyme)
  - NotI (with AvrII as the other enzyme)

Reaction Set up	Volume
Plasmid DNA (0.5 µg/µl)	2.0 µl
10X Universal Buffer	2.0 µl
Enzyme Tester	0.5 µl
Other Enzyme (if applicable)	0.5 µl
Water	15.0 µl
<b>Total</b>	<b>20.0 µl</b>

### Test 3

- Plasmid used: piLenti-siRNA-GFP (LV016)
- Enzymes tested:
  - Mfe I (with Mlul as the other enzyme)
  - EcoRI

Reaction Set up	Volume
Plasmid DNA (0.4 µg/µl)	3.0 µl
10X Universal Buffer	2.0 µl
Enzyme Tester	0.5 µl
Other Enzyme (if applicable)	0.5 µl
Water	14.0 µl
<b>Total</b>	<b>20.0 µl</b>

Result

Figure 1 – Restriction Enzyme Digest using pLenti-GIII-CMV-PDCD1-GFP-2A-Puro (Cat. No. LV257992)

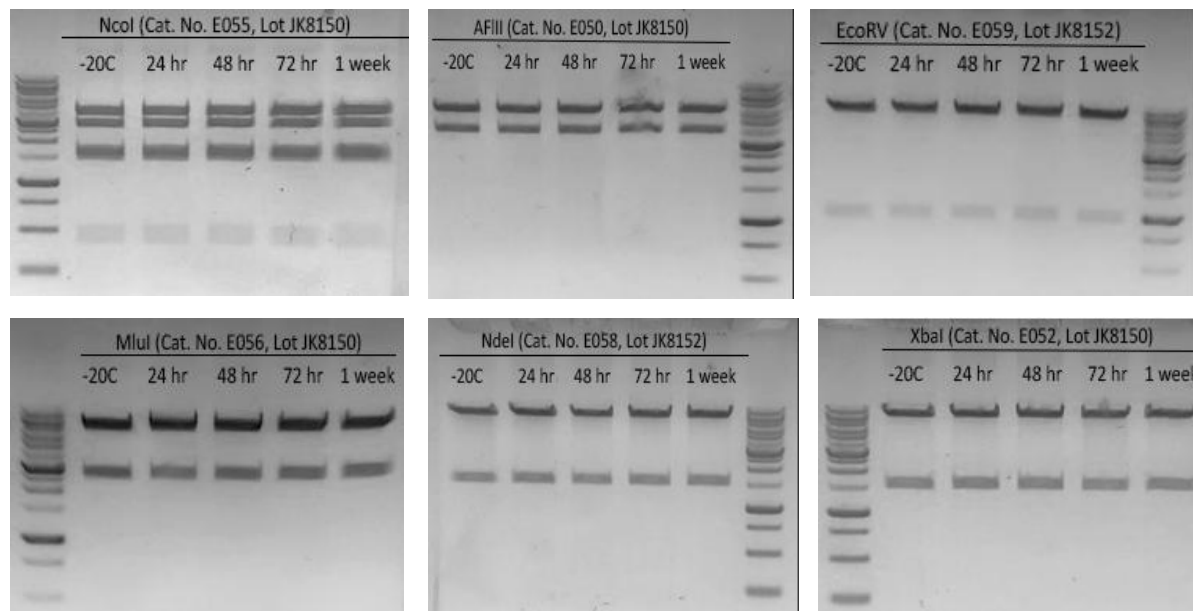


Figure 2 – Restriction Enzyme Digest using pLenti-III-HA (Cat. No. LV022)

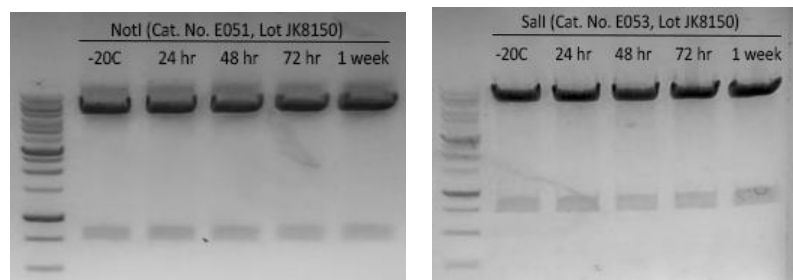
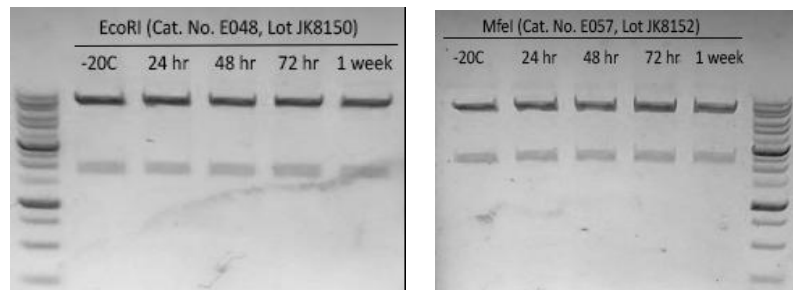


Figure 3 – Restriction Enzyme Digest using piLenti-siRNA-GFP (Cat. No. LV016)



Conclusion

All five conditions consistently exhibited similar band intensities across all the restriction enzymes. In conclusion, **abm's** restriction enzymes are stable at room temperature for up to 1 week without any loss of enzymatic activity.