

## New England Biolabs Product Specification

|                               |   |
|-------------------------------|---|
| <i>Product Name:</i>          | <i>PstI-HF<sup>®</sup></i>  |
| <i>Catalog #:</i>             | <i>R3140T/M</i>   |
| <i>Concentration:</i>         | <i>100,000 units/ml</i>   |
| <i>Unit Definition:</i>       | <i>One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA in 1 hour at 37°C in a total reaction volume of 50 µl.</i> |
| <i>Shelf Life:</i>            | <i>24 months</i>  |
| <i>Storage Temp:</i>          | <i>-20°C</i>  |
| <i>Storage Conditions:</i>    | <i>250 mM NaCl, 10 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, 0.15 % Triton X-100, 200 µg/ml BSA, (pH 7.4 @ 25°C)</i>                   |
| <i>Specification Version:</i> | <i>PS-R3140T/M v2.0</i>   |
| <i>Effective Date:</i>        | <i>30 Apr 2018</i>  |

### Assay Name/Specification (minimum release criteria)

**Exonuclease Activity (Radioactivity Release)** - A 50 µl reaction in CutSmart<sup>®</sup> Buffer containing 1 µg of a mixture of single and double-stranded [<sup>3</sup>H] *E. coli* DNA and a minimum of 200 units of PstI-HF<sup>®</sup> incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.

**Ligation and Recutting (Terminal Integrity)** - After a 100-fold over-digestion of Lambda DNA with PstI-HF<sup>®</sup>, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95% can be recut with PstI-HF<sup>®</sup>.

**Non-Specific DNase Activity (16 Hour)** - A 50 µl reaction in CutSmart<sup>®</sup> Buffer containing 1 µg of Lambda DNA and a minimum of 200 units of PstI-HF<sup>®</sup> incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

**Protein Purity Assay (SDS-PAGE)** - PstI-HF<sup>®</sup> is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.



Date 30 Apr 2018

Derek Robinson  
Director of Quality Control

