

## New England Biolabs Product Specification

*Product Name:* 3'-Desthiobiotin-GTP  
*Catalog #:* N0761S  
*Concentration:* 5 mM  
*Shelf Life:* 36 months  
*Storage Temp:* -20°C  
*Composition (1X):* Supplied in Ultrapure water as a Triethylammonium salt (pH 7.0).  
*Specification Version:* PS-N0761S v1.0  
*Effective Date:* 22 Mar 2017

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

**Concentration (A260)** - The concentration of 3'-Desthiobiotin-GTP is between 5 and 5.5 mM as determined by UV absorption at 260 nm.

**Endonuclease Activity (Nicking)** - A 50 µl reaction in NEBuffer 4 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 5 nmoles of 3'-Desthiobiotin-GTP incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.

**Functional Testing (Capping, 3'DTB-GTP)** - A 20 µl reaction in Capping Buffer containing 0.5 mM 3'-Desthiobiotin-GTP, 0.1 mM SAM, 62.5 ng of a 25 mer RNA transcript, 20 units of Vaccinia Capping Enzyme and 0.05 units of Yeast Inorganic Pyrophosphatase incubated for 30 minutes at 37°C results in >90% capped transcript as determined by gel electrophoresis.

**Physical Purity (HPLC)** - 3'-Desthiobiotin-GTP is ≥ 95% pure as determined by HPLC analysis.

**RNase Activity (Extended Digestion)** - A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 5 nmoles of 3'-Desthiobiotin-GTP is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.



Date 22 Mar 2017

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