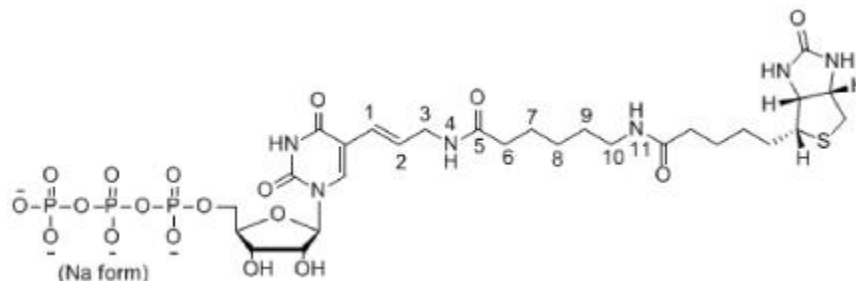


# Bio-11-UTP

Store below  $-70^{\circ}\text{C}$ .**Do not store in a frost-free freezer.**

<b>Catalog #:</b>	AM8450	AM8451
<b>Amount:</b>	250 nmol	2250 nmol
<b>Volume:</b>	25 $\mu\text{L}$	30 $\mu\text{L}$
<b>Concentration:</b>	10 mM	75 mM
<b>Product Description:</b>	Bio-11-UTP (Biotin-11-Uridine-5'-triphosphate)	
<b>Structure:</b>		



<b>Molecular Weight:</b>	944.62 (acid form)
<b>UV Absorption Maximum:</b>	Extinction coefficient = $7,100 \text{ M}^{-1}\text{cm}^{-1}$ at 289 nm
<b>Purity:</b>	95% by HPLC at 289 nm Column: Ion exchange Buffer A: 0.01 M $\text{Na}_2\text{HPO}_4$ pH 6.6 Buffer B: 0.7 M $\text{Na}_2\text{HPO}_4$ pH 6.6 0–100% B over 35 min, 1.0 mL/min
<b>Storage Conditions:</b>	Store below $-70^{\circ}\text{C}$ . <b>Do not store in a frost-free freezer.</b> Avoid repeated freeze/thaw cycles. We recommend dividing the product into single-use portions upon first use.
<b>Storage Buffer:</b>	20 mM Tris HCl pH 7.5

## USER INFORMATION

<b>General Information:</b>	<p>Biotinylated UTP is intended for use as a substrate in in vitro transcription reactions with a variety of RNA polymerases, including T7 RNA polymerase, SP6 RNA polymerase, or T3 RNA polymerase. Biotinylated RNA probes may be used in place of radioactively labeled RNA probes in many applications, including in situ hybridization and chromosome mapping.</p> <p>Biotinylated probes can be detected using a variety of methods based on streptavidin binding. Biotin-bound streptavidin can be detected directly, using fluorescently labeled streptavidin, or indirectly, using a streptavidin-conjugated enzyme assay or appropriately labeled or conjugated anti-streptavidin antibody.</p>
<b>References:</b>	<ol style="list-style-type: none"> <li>1. Langer PR, Waldrop AA, Ward DC (1981) Enzymatic synthesis of biotin-labeled polynucleotides: novel nucleic acid affinity probes. <i>Proc. Natl. Acad. Sci. USA</i> <b>78</b>(11):6633–6637.</li> <li>2. Fenn BJ, Herman TM (1990) Direct quantitation of biotin-labeled nucleotide analogs in RNA transcripts. <i>Anal Biochem</i> <b>190</b>(1):78–83.</li> </ol>

## QUALITY CONTROL

<b>Nonspecific Endonuclease Activity:</b>	Meets or exceeds specification when a sample is incubated for 14–16 hr with 300 ng supercoiled plasmid DNA and analyzed by agarose gel electrophoresis.
<b>Exonuclease Activity:</b>	Meets or exceeds specification when a sample is incubated for 14–16 hr with 40 ng $^{32}\text{P}$ -labeled <i>Sau3A</i> fragments of pUC19 and analyzed by PAGE.
<b>RNase Activity:</b>	Meets or exceeds specification when a sample is incubated for 14–16 hr with 25 ng $^{32}\text{P}$ -labeled RNA and analyzed by PAGE.
<b>Functional Testing:</b>	Bio-11-UTP is functionally tested in the Ambion® MessageAmp™ or MessageAmp™ II aRNA Amplification Kits (Cat #AM1750, AM1751).

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## OTHER INFORMATION

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### Material Safety Data Sheets:

Material Safety Data Sheets (MSDSs) can be printed or downloaded from product-specific links on our website at the following address: [www.ambion.com/techlib/msds](http://www.ambion.com/techlib/msds). Alternatively, e-mail your request to [MSDS\\_Inquiry\\_CCRM@appliedbiosystems.com](mailto:MSDS_Inquiry_CCRM@appliedbiosystems.com). Specify the catalog or part number(s) of the product(s), and we will e-mail the associated MSDSs unless you specify a preference for fax delivery. For customers without access to the internet or fax, our technical service department can fulfill MSDS requests placed by telephone or postal mail. (Requests for postal delivery require 1–2 weeks for processing.)

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