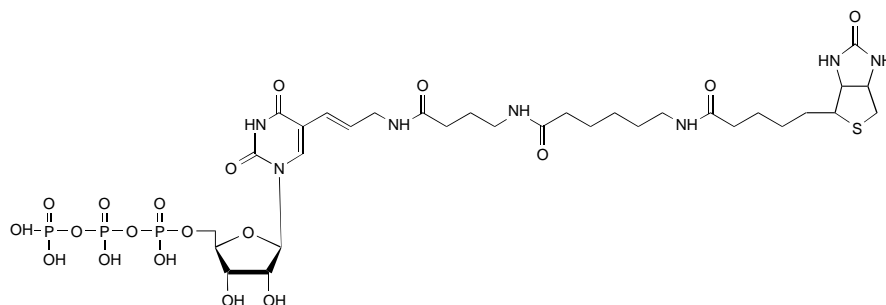




## SPECIFICATION SHEET

### Bio-16-UTP (Biotin-16-uridine-5'-triphosphate)

Cat. No. 42814



5-[N-[N-(N-biotinyl-ε-aminocaproyl)-γ-aminobutyryl]-3-aminoallyl]-uridine-5'-triphosphate

C<sub>32</sub>H<sub>52</sub>N<sub>7</sub>O<sub>19</sub>P<sub>3</sub>S

FW 963.7 (free acid)

**Concentration:** 10 mM ( $\epsilon_M = 10,700$  at 240 nm, pH 7.0)

**Quantity:** 250 nmol (25μl), as tetralithium salt

**Appearance:** Clear, colorless solution

**Purity:** Contains >92% Bio-16-UTP and <5% Bio-16-UDP by HPLC monitored at 240 nm

**Storage:** Store at -20°C.

**Applications:** Bio-16-UTP can replace UTP in an *in vitro* transcription reaction catalyzed by T3, T7 or SP6 RNA polymerases. The biotin-labeled RNA transcripts produced by these reactions are suitable for a wide range of applications such as nucleic acid hybridization, sequencing and genome analysis.

The transcription reaction produces many RNA copies of the DNA template(s) during a short incubation period. RNA probes offer higher target specificity and greater sensitivity than DNA probes due to the higher melting temperature of the RNA-DNA hybrids than the corresponding DNA-DNA hybrids. The single stranded RNA probes offer selectivity unavailable with double stranded DNA probes, because they are strand specific. Furthermore, RNA probes hybridize much more efficiently to target molecules than DNA probes because there is no self-hybridization.

The biotin-labeled hybridized probes can be detected by a reporter molecule linked to streptavidin, avidin or anti-biotin antibody. Such a complex can be detected directly, e.g., by excitation of a fluorophore conjugated to streptavidin, or indirectly, e.g., using an enzyme conjugate that can produce an insoluble colored precipitate.

Complete kits and protocols are available for labeling (Enzo's **BioProbe<sup>®</sup> Labeling Systems** and **BioArray<sup>™</sup> Labeling Systems**), for membrane hybridization and detection (Enzo's **MaxSense<sup>®</sup> Hybridization and Detection Systems**) and for *in situ* hybridization and detection procedures (Enzo's **SimplySensitive<sup>®</sup>** and **UltraSensitive<sup>®</sup> Enhanced In Situ Detection Systems**).

#### For Technical Assistance call ENZO:

Toll free from the U.S. and Canada: 1-800-221-7705

All others: 631-694-7070

Fax: 631-694-7501

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This product or the use of this product is covered by one or more claims of Enzo patents including, but not limited to the following: U.S. Patent Nos. 5,328,824; 5,449,767; 4,711,955; 5,476,928; 4,994,373; 5,175,269 and 5,002,885; EP 0 063 879 B1; EP 0 329 198 B1; EP 0 122 614 B1; EP 0 128 332 B1; DK 171 822; Canadian Patent Nos. 1,219,824; 1,254,525; 1,309,672 and 1,228,811; Japanese Patent Nos. 2,131,226; 1,416,584; 2,595,201 and 2,577,881; and patents pending.