

Cy7-UTP

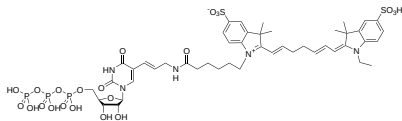
Catalog Number: 17120

Unit Size: 25 nmoles

Product Details

Storage Conditions	Freeze (< -15 °C), Minimize light exposure
Expiration Date	24 months upon receiving

Chemical Properties

Appearance	Liquid
Molecular Weight	1206.07
Soluble In	Water
Chemical Structure	

Spectral Properties

Excitation Wavelength	756 nm
Emission Wavelength	779 nm

Applications

Cy7-UTP is a near-infrared fluorescent UTP analog used for enzymatic RNA labeling through T7 RNA polymerase-mediated in vitro transcription. It enables the preparation of Cy7-labeled RNA probes for diverse fluorescence-based hybridization applications, including fluorescence in situ hybridization (FISH), gene expression microarrays, whole chromosome painting, karyotyping, and RNA localization studies.

With excitation and emission maxima near 756 nm and 779 nm, respectively, Cy7-UTP provides strong NIR fluorescence with minimal overlap into visible detection channels. This property supports multiplexed imaging workflows and is especially useful in minimizing tissue autofluorescence or background signal. Cy7-labeled RNA transcripts can be visualized following electrophoresis using near-infrared fluorescence imaging systems without requiring additional dye staining. Cy7-UTP can also be used in FRET-based assays when paired with an appropriate donor fluorophore, enabling fluorescence-based measurements of RNA interactions or conformational changes in single-molecule or ensemble formats.