# Product Datasheet

## Biotin16 NT Labeling Kit (orb1733622)

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| **Catalog Number** | orb1733622 |
| **Category** | Small Molecules |
| **Description** | Biotin16 Nick Translation Labeling Kit contains all reagents (except template and materials for purification of the probe) required for nick translation-based Biotin labeling of DNA providing a highly efficient, easy-to-perform and rapid labeling technology. The labeling principle is similar to the Biotin-Nick Translation Mix (Roche). Nick translation labeling is based on the reverse activities of Polymerase I and DNase I. DNase I is able to introduce randomly distributed nicks to double stranded DNA at low enzyme concen-trations. The 5'→3' exonuclease activitiy of Polymerase I removes nucleotides from the 3' side of the nick while synthesizing a partial new complementary strand using the 3'-OH termini as primer. In the presence of labeled dUTP Polymerase I incorporates labeled dUTP instead of dTTP. The BIO16 NT labeling mix contains an optimized Biotin-labeled dUTP for incorporation into DNA by nick translation using DNA Polymerase I. Biotin-16-dUTP is enzymatically incorporated into DNA as substitute for its natural counterpart dTTP. Optimal substrate properties and thus labeling efficiency as well as an efficient detection of the Biotin moiety is ensured by a 16-atom linker attached to the C5 position of uridine. The well balanced polymerase/nuclease activities of the en-zyme mix ensure the generation of highly labeled double stranded DNA fragments. The resultant Biotin-labeled DNA is suitable for application in FISH and other nucleic acid hybridization assays. |
| **Storage** | store at -20 °C. avoid freeze/thaw cycles |
| **Note** | For research use only |

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