

## Product Datasheet

### Aminoallyl-dUTP-ATTO-680 (orb1733883)

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Catalog Number</b>    | orb1733883                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Category</b>          | Small Molecules                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Description</b>       | Aminoallyl-dUTP-ATTO680 is recommended for direct enzymatic labeling of DNA/cDNA e.g. by PCR and Nick Translation. It is incorporated as substitute for its natural counterpart dTTP. The resulting Dye-labeled DNA/cDNA probes are ideally suited for fluorescence hybridization applications such as FISH or microarray-based gene expression profiling. Optimal substrate properties and thus labeling efficiency is ensured by an optimized linker attached to the C5 position of uridine. Recommended Aminoallyl-dUTP-ATTO680/dTTP ratio for PCR and Nick Translation: 30% Aminoallyl-dUTP-680/70% dTTP. |
| <b>Form/Appearance</b>   | solution in water; Color: blue; pH: 7.5 ± 0.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Concentration</b>     | 1.0 mM-1.1 mM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Purity</b>            | ≥ 95% (HPLC)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>MW</b>                | Theoretical MW: 1030.83 g/mol (free acid); Detected MW: 1030.20 g/mol (free acid)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Application notes</b> | Incorporation into DNA/cDNA by: PCR with Taq polymerase in-house data; Nick Translation with DNase I/DNA Polymerase in-house data. Spectroscopic Properties: $\lambda_{exc}$ 681 nm, $\lambda_{em}$ 698 nm, $\epsilon$ 125.0 L mmol <sup>-1</sup> cm <sup>-1</sup> (Tris-HCl pH 7.5).                                                                                                                                                                                                                                                                                                                         |
| <b>Formula</b>           | C <sub>39</sub> H <sub>49</sub> N <sub>6</sub> O <sub>19</sub> P <sub>3</sub> S                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>SMILES</b>            | <chem>[C@@H]1(C[C@@H](O[C@@H]1COP(=O)(OP(=O)(OP(=O)(O)O)O)O)n1c(=O)[nH]c(=O)c(c1)/C=C/CNC(=O)CCCN1c2c(C(=CC1(C)C)CS(=O)(=O)[O-])cc1c(c2)Oc2c(=N1)cc1c(=[N+])(CCC1)CC)c2)O</chem>                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Storage</b>           | store at -20 °C. Short term exposure (up to 1 week cumulative) to ambient temperature possible                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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**Note**

For research use only

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