



CERTIFICATE OF ANALYSIS

Product **BIOTIN (LONG ARM) MALEIMIDE**

Catalog No. SP-1501

Amount 12 mg

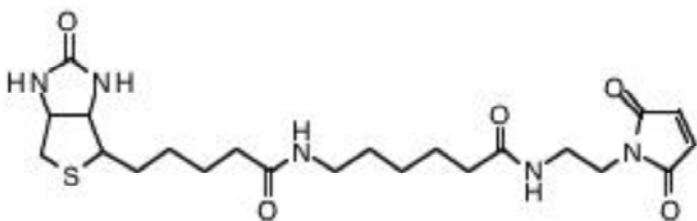
Lot No. ZD1006

Storage -20 °C to -80 °C. Storage in solution not recommended.

Empirical formula $C_{22}H_{33}N_5O_5S$

FW 479.6

Structure:



Biotin (Long Arm) Maleimide is designed for biotinylation proteins¹, nucleic acids² or other molecules containing one or more thiol groups. The presence of the 6-aminohexanoate spacer arm between the maleimide group and biotin reduces the possibility of steric hindrance. Molecules to be labeled with Biotin (Long Arm) Maleimide require free thiol groups. In the case of proteins, Biotin (Long Arm) Maleimide will react with exposed cysteine residues. Alternatively, free thiols may be generated by reducing disulfide bonds or by modifying other reactive groups such as primary amines with compounds like Traut's reagent (2-iminothiolane). Once free thiol groups are available, labeling can be carried out as outlined below. For labeling nucleic acids, thiols can be introduced into DNA, RNA, or oligonucleotides using the FastTag^{®2}, 5' EndTag[™] or 3' EndTag[™] nucleic acid labeling systems.

Note: Labeled DNA standard (50µl of λ Hind III, 2.0 ng/µl in TE) is provided as a control for the FastTag[®] nucleic acid labeling protocol and is not intended for use in the procedure for labeling proteins. TE=10 mM Tris, pH 8.0, 1 mM EDTA.