

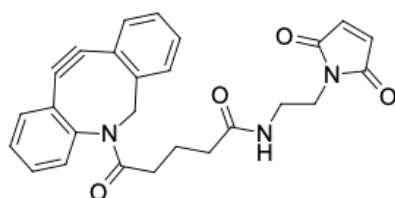
DBCO-maleimide

<http://www.lumiprobe.com/p/n-glutaroyl-dbc-maleimide>

DBCO-maleimide is a bifunctional linker containing a maleimide group and a DBCO (Dibenzocyclooctyne, ADIBO) moiety.

The maleimide group specifically and efficiently reacts with thiols to form thioether bonds. The low mass weight adds minimal spacer to modified molecules and enables the simple and efficient incorporation of the DBCO moiety into cysteine-containing peptides or other thiol-containing biomolecules.

DBCO is one of the most reactive cycloalkynes for strain-promoted alkyne azide cycloaddition (SPAAC). DBCO reacts instantly with azides without needing a Cu(I) catalyst, resulting in a stable triazole linkage. The reaction rate is much higher than that of copper-catalyzed reaction, and reactions with many other cyclooctynes. Unlike other cyclooctynes, DBCO does not react with tetrazines — this allows to carry out orthogonal conjugation of azides with DBCO and trans-cyclooctenes with tetrazines.



Structure of DBCO-maleimide

General properties

Appearance: white solid

Molecular weight: 441.49

Molecular formula: $C_{26}H_{23}N_3O_4$

Solubility: methylene, DMSO, DMF, acetonitrile

Quality control: NMR 1H and HPLC-MS (95+%)

Storage conditions: 12 months after receipt at $-20^\circ C$ in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate.

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