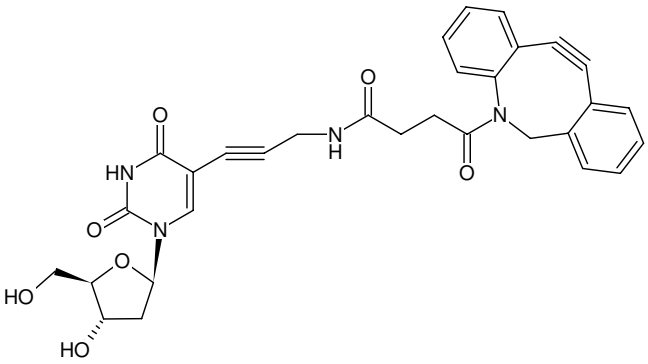
DATA SHEET

Jena Bioscience

5-Dibenzylcyclooctyne-2'-deoxyuridine (5-DBCO-dU)

5-Dibenzylcyclooctyne-dU

Cat. No.	Amount
CLK-082-10	10 mg



Structural formula of 5-Dibenzylcyclooctyne-2'-deoxyuridine (5-DBCO-dU)

For research use only!

Shipping: shipped at ambient temperature

Storage Conditions: store at -20 °C

Short term exposure (up to 1 week cumulative) to ambient temperature possible.

Shelf Life: 12 months after date of delivery

Molecular Formula: $C_{31}H_{28}N_4O_7$ (free acid)

Molecular Weight: 568.58 g/mol (free acid)

Exact Mass: 568.20 g/mol (free acid)

Purity: ≥ 95 % (HPLC)

Form: solid

Color: colorless to slightly yellow

Spectroscopic Properties: λ_{max} 289 nm, ε 12.5 L $mmol^{-1}$ cm^{-1} (Tris-HCl pH 7.5)

Applications:
DNA synthesis monitoring (potentially)

Description:
5-DBCO-dU (5-Dibenzylcyclooctyne-2'-deoxyuridine) can **potentially** be used as a replacement for BrdU (5-Bromo-2'-deoxyuridine) or the copper-catalyst requiring 5-EdU (5-Ethynyl-2'-deoxyuridine) to measure *de novo* DNA synthesis in proliferating cells.
5-DBCO-dU is cell permeable and may incorporate into replicating DNA instead of its natural analog thymidine.

The resulting DBCO-functionalized DNA can subsequently be detected via Cu(I)-free Click Chemistry that offers the choice to

- introduce a Biotin group for subsequent purification tasks (via Azides of Biotin)
- introduce a fluorescent group for subsequent microscopic imaging (via Azides of fluorescent dyes).

Related Products:
5-Ethynyl-2'-deoxy-uridine (5-EdU), #CLK-N001
5-Vinyl-2'-deoxyuridine (5-VdU), #CLK-050
5-Azidomethyl-2'-deoxyuridine(5-AmdU), #CLK-050