bio-techne
TOCRIS

Print Date: Sep 18th 2025

Certificate of Analysis

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Product Name: **DBCO PEG4 Biotin** **Catalog No.: 7480** **Batch No.: 1**

CAS Number: 1255942-07-4

IUPAC Name: (3a*S*,4*S*,6a*R*)-*N*-[19-(11,12-Didehydrodibenz[*b*,*f*]azocin-5(6*H*)-yl)-15,19-dioxo-3,6,9,12-tetraoxa-16-azanonadec-1-yl]hexahydro-2-oxo-1*H*-thieno[3,4-*d*]imidazole-4-pentanamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{39}H_{51}N_5O_8S$

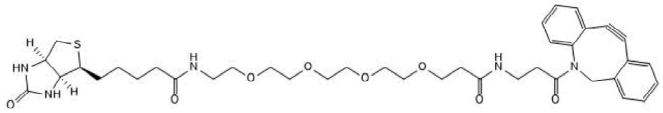
Batch Molecular Weight: 749.92

Physical Appearance: Off-white solid

Solubility: DMSO to 100 mM
ethanol to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.3% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956

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Description:

DBCO-PEG4-Biotin is a biotinylation reagent for labeling azide-containing biomolecules via Cu(I)-free Strain-Promoted Alkyne-Azide Click Chemistry (SPAAC) reaction. The hydrophilic PEG4 linker reduces or eliminates aggregation and precipitation during the labeling process by increasing the hydrophilicity of the target molecule. The PEG linker in DBCO-PEG4-Biotin also enhances the accessibility of the biotin moiety, improving the detection efficiency of the biotinylated molecule via fluorescent or HRP-labeled streptavidin or its affinity purification via streptavidin agarose.

Physical and Chemical Properties:

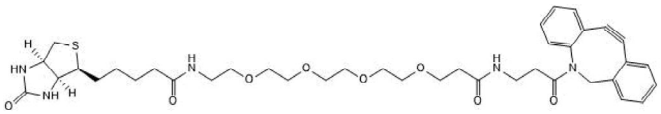
Batch Molecular Formula: $C_{39}H_{51}N_5O_8S$

Batch Molecular Weight: 749.92

Physical Appearance: Off-white solid

Minimum Purity: ≥95%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM
ethanol to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Bernardim *et al* (2020) Precise installation of diazo-tagged side-chains on proteins to enable *in vitro* and in-cell site-specific labeling. Bioconjug.Chem. ***31*** 1604. PMID: 32375474.

Darabedian *et al* (2020) O-Acetylated chemical reporters of glycosylation can display metabolism-dependent background labeling of proteins but are generally reliable tools for the identification of glycoproteins. Front.Chem. ***8*** 318. PMID: 32411667.

Sawant *et al* (2016) A versatile toolbox for posttranscriptional chemical labeling and imaging of RNA. Nucleic Acids Res. ***44*** e16. PMID: 26384420.