

Product Data Sheet

Product Name: DBCO-amine
Cat. No.: GC63331

Chemical Properties

Cas. No. 1255942-06-3

Formula $C_{18}H_{16}N_2O$ M.Wt 276.33

Solubility Storage Store at $-20^{\circ}C$, protect from light

General tips For obtaining a higher solubility, please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

Protocol

DBCO-amine

DTPA 10mM DTPA 100mM MES pH=5.5 $75^{\circ}C$ 10mM $TbCl_3$ $75^{\circ}C$ 10 Tb^{3+} DTPA DTPA:Tb

DBCO-amine DMSO 8.33% 10mM DTPA:Tb 100mM MES pH=5.5 DBCO-amine 50mM 50mM 1--3-(3-)) EDC 120 DBCO-amine DTPA:Tb CLC

Sephadex G10 100mM MES pH=5.5 $\geq 700Da$ CLC 350nm 429nm 544nm UPLC-MS m/z = 806.2 CLC

DBCO-amine

Caution: Product has not been fully validated for medical applications. For research use only.
Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

References:

[1] Bishop SC, Winefield R, Anbanandam A, et al. Aqueous synthesis of a small-molecule lanthanide chelator amenable to copper-free click chemistry. PLoS One. 2019 Mar 27;14(3):e0209726.

Background

DBCO-amine features a highly strained cyclooctyne structure and is commonly used in free-copper click chemistry reactions^[1]. The amino terminus of DBCO-amine can react with functional groups such as carboxyl groups to form amide bonds, which are utilized for conjugating biological molecules including proteins, antibodies, and nucleic acids^[2].

References:

[1] Ackermann U, Jäger L, Rigopoulos A, et al. ¹⁸F-labeling and initial in vivo evaluation of a Hitomi peptide for imaging tissue transglutaminase 2. Nucl Med Biol. 2023 Jan-Feb;116-117:108308.

[2] Fuku R, Liu Y, Giuliana P, et al. Efficient Dual Surface Modification of Cellulose Nanocrystals with Hydrophobic Moieties and Functional Polymers via a Grafting-to Approach. Biomacromolecules. 2025 Sep 8;26(9):6233-6243.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA