

DBCO-PEG4-GGFG-Dxd

Chemical Properties

CAS No. : 2694856-51-2

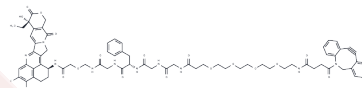
Formula: C72H79FN10O17

Molecular Weight: 1375.45

Keep away from direct sunlight

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	DBCO-PEG4-GGFG-Dxd is an ADC linker-payload intermediate used for synthesizing antibody-drug conjugates. This product consists of the DNA topoisomerase I inhibitor Dxd (Deruxtecan) conjugated to a cleavable GGFG tetrapeptide-based linker. The terminal DBCO group functions as a click chemistry handle, enabling strain-promoted alkyne-azide cycloaddition (SPAAC) with azide-containing molecules for the efficient construction of tumor-targeted ADCs.
Targets(IC50)	Topoisomerase
In vitro	In biochemical and cell-based conjugation assays, DBCO-PEG4-GGFG-Dxd exhibits rapid and specific reactivity with azide-functionalized antibodies, forming stable ADCs that release the active Dxd payload upon lysosomal cathepsin-mediated cleavage of the GGFG peptide linker, resulting in potent cytotoxicity against topoisomerase I-expressing cancer cells [1].
In vivo	In pharmacological studies using tumor-bearing mouse models, the administration of ADCs synthesized using DBCO-PEG4-GGFG-Dxd leads to a significant, dose-dependent inhibition of tumor growth and prolonged survival; the GGFG linker ensures systemic stability while allowing efficient intratumoral release of Dxd, demonstrating the potential for targeted delivery and reduced off-target toxicity in preclinical cancer therapy research [1].

Solubility Information

Solubility	DMSO: 40 mg/mL (29.08 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.727 mL	3.6352 mL	7.2703 mL
5 mM	0.1454 mL	0.727 mL	1.4541 mL
10 mM	0.0727 mL	0.3635 mL	0.727 mL
50 mM	0.0145 mL	0.0727 mL	0.1454 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Anish Thomas, et al. Antibody-drug conjugates for cancer therapy. *Lancet Oncol.* 2016 Jun;17(6):e254-e262.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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