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Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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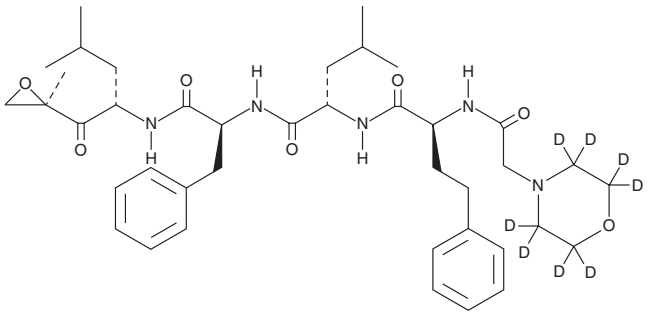
PRODUCT INFORMATION

Carfilzomib-d_8

Item No. 22558

CAS Registry No.: 1537187-53-3
Formal Name: (αS)-α-[[2-(4-morpholinyl-2,2,3,3,5,5,6,6-d_8)acetyl]amino] benzenebutanoyl-L-leucyl-N-[(1S)-3-methyl-1-[[(2R)-2-methyl-2-oxiranyl] carbonyl]butyl]-L-phenylalaninamide
MF: $C_{40}H_{49}D_8N_5O_7$
FW: 728.0
Chemical Purity: ≥98% (Carfilzomib)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_8); ≤1% d_0
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Carfilzomib-d_8 is intended for use as an internal standard for the quantification of carfilzomib (Item No. 17554) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Carfilzomib-d_8 is supplied as a crystalline solid. A stock solution may be made by dissolving the carfilzomib-d_8 in the solvent of choice. Carfilzomib-d_8 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of carfilzomib-d_8 in ethanol is approximately 1 mg/ml and approximately 15 mg/ml in DMSO and DMF.

Description

Carfilzomib is an irreversible proteosome inhibitor classified as a peptide epoxyketone. It targets the chymotrypsin-like β5 subunit of the constitutive 20S proteasome (IC_{50} = 5.2 nM) and the β5i subunit of the immunoproteasome 20Si (LMP7; IC_{50} = 14 nM) with minimal cross reactivity to other proteases.[1,2] It can induce cell cycle arrest and apoptosis in human cancer cell lines including multiple myeloma, lymphoma, and various solid tumors (IC_{50}s = 2.4-20 nM).[3,4]

References

1. Dou, Q.P. and Zonder, J.A. Overview of proteasome inhibitor-based anti-cancer therapies: Perspective on bortezomib and second generation proteasome inhibitors versus future generation inhibitors of ubiquitin-proteasome system. *Curr. Cancer Drug Targets* **14(6)**, 517-536 (2014).
2. Zhou, H.J., Aujay, M.A., Bennett, M.K., *et al.* Design and synthesis of an orally bioavailable and selective peptide epoxyketone proteasome inhibitor (PR-047). *J. Med. Chem.* **52(9)**, 3028-3038 (2009).
3. Zhang, W. and Sidhu, S.S. Development of inhibitors in the ubiquitination cascade. *FEBS Lett.* **588(2)**, 356-367 (2014).
4. Demo, S.D., Kirk, C.J., Aujay, M.A., *et al.* Antitumor activity of PR-171, a novel irreversible inhibitor of the proteasome. *Cancer Res.* **67(13)**, 6383-6391 (2007).

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