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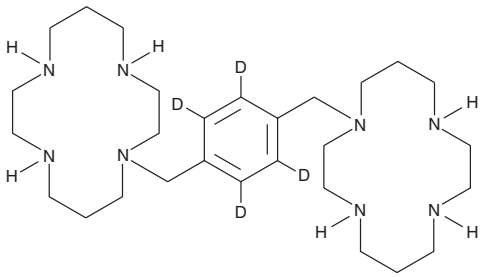
PRODUCT INFORMATION

Plerixafor-d_4

Item No. 26490

CAS Registry No.: 1246819-87-3
Formal Name: 1,4-*bis*((1,4,8,11-tetraazacyclotetradecan-1-yl)methyl) benzene-d_4
MF: $C_{28}H_{50}D_4N_8$
FW: 506.8
Chemical Purity: ≥95% (Plerixafor)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_4); ≤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

Plerixafor-d_4 is intended for use as an internal standard for the quantification of plerixafor (Item No. 10011332) 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).

Plerixafor-d_4 is supplied as a solid. A stock solution may be made by dissolving the plerixafor-d_4 in the solvent of choice, which should be purged with an inert gas. Plerixafor-d_4 is slightly soluble in methanol.

Description

Plerixafor is a partial antagonist of chemokine receptor 4 (CXCR4) with IC_{50} values ranging from 0.02 to 0.13 µg/ml for inhibiting calcium flux in peripheral blood mononuclear cells (PBMCs), various types of T cells, and mouse lymphocytic leukemia cells.[1] It is selective for CXCR4 over CXCR1-3 and CXCR5-9 (IC_{50}s = >25 µg/ml). Plerixafor decreases infectious virus content in the supernatant of Jurkat cells chronically infected with HIV-1(III_B) (EC_{50} = ~0.02 µg/ml).[2] It rapidly mobilizes murine and human hematopoietic stem and murine long-term repopulating cells for transplantation alone and, with a synergistic effect, when used in combination with G-CSF.[3] Plerixafor also increases T cell trafficking in mouse blood, spleen, and central nervous system.[4,5] Plerixafor (1.25 mg/kg twice per day) decreases the number of 4T1 murine mammary carcinoma cells in the lung in a mouse model of lung metastasis.[6]

References

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3. Hess, D.A., Bonde, J., Craft, T.C., *et al. Biol. Blood Marrow Transplant* **13(4)**, 398-411 (2007).
4. Bernardini, G., Sciumè, G., Bosisio, D., *et al. Blood* **111(7)**, 3626-3634 (2008).
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