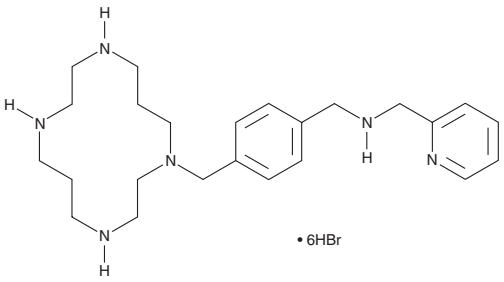
PRODUCT INFORMATION

AMD 3465 (hydrobromide)

Item No. 11959

CAS Registry No.: 185991-07-5
Formal Name: N-[[4-(1,4,8,11-tetraazacyclotetradec-1-ylmethyl)phenyl]methyl]-2-pyridinemethanamine, hexahydrobromide
MF: $C_{24}H_{38}N_6 \bullet 6HBr$
FW: 896.1
Purity: ≥95%
UV/Vis.: λ_{max}: 203, 259 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

AMD 3465 (hydrobromide) is supplied as a crystalline solid. A stock solution may be made by dissolving the AMD 3465 (hydrobromide) in the solvent of choice, which should be purged with an inert gas. AMD 3465 (hydrobromide) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of AMD 3465 (hydrobromide) in these solvents is approximately 3 and 2.5 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of AMD 3465 (hydrobromide) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of AMD 3465 (hydrobromide) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

C-X-C chemokine receptor type 4 is a receptor for the stromal cell-derived factor-1 which is designated as chemokine ligand 12 (CXCL12). It is involved in cell progression, hematopoiesis, cancer, HIV entry, and rheumatoid arthritis.[1-3] AMD 3465 blocks the cell surface binding of CXCL12 with an IC_{50} value of 18 nM.[4] It inhibits CXCL12-induced calcium mobilization (IC_{50} = 4 nM) and at 6,250 nM completely blocks CXCL12-induced chemotaxis of SupT1 cells.[4] AMD 3465 is active against various HIV strains with IC_{50} values ranging from 6 to 12 nM.[4] It dose dependently inhibits eosinophil recruitment during type-2 granuloma formation and interferes with primary and secondary T-cell activation events in lymphoid tissue.[5] At 50 µg/day, AMD 3465 blocks tumor growth

References

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3. Tamamura, H., Hiramatsu, K., Ueda, S., *et al. J. Med. Chem.* **48**, 380-391 (2005).
4. Hatse, S., Princen, K., De Clercq, E., *et al. Biochem. Pharmacol.* **70**, 752-761 (2005).
5. Hu, J.S., Freeman, C.M., Stolberg, V.R., *et al. Am. J. Pathol.* **169(2)**, 424-432 (2006).
6. Yang, L., Jackson, E., Woerner, B.M., *et al. Cancer Res.* **67(2)**, 651-658 (2007).

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