Overview

Product name: AMD3100 octahydrochloride, CXCR4 antagonist
Description: Highly selective CXCR4 antagonist

Biological description: Plerixafor (hydrochloride) is a macrocyclic compound that acts as an irreversible antagonist against the binding of CXCR4 with its ligand, SDF-1 (CXCL12).

It suppresses infection by HIV with an IC₅₀ value of 1-10 ng/ml with selectivity toward CXCR4-tropic virus. Plerixafor mobilizes hematopoietic stem and progenitor cells for transplant better than G-CSF alone. It also increases T-cell trafficking in the blood and spleen as well as the central nervous system. Plerixafor regulates the growth of primary and metastatic breast cancer cells and inhibits dissemination of ovarian carcinoma cells.

Purity: > 99%
CAS Number: 155148-31-5
Chemical structure:

Properties

Chemical name: 1,1’-[1,4-Phenylenebis(methylene)bis-1,4,8,11-tetraazacyclotetradecane octahydrochloride
Molecular weight: 794.48
Molecular formula: C₂₈H₅₄N₈.8HCl
PubChem identifier: 65014
Storage instructions: Store at -20°C. Store under desiccating conditions. The product can be stored for up to 12 months.
Solubility overview: Soluble in PBS, pH 7.2, at 10 mg/ml.
Handling: Wherever possible, you should prepare and use solutions on the same day. However, if you need to make up stock solutions in advance, we recommend that you store the solution as aliquots in
tightly sealed vials at -20°C. Generally, these will be useable for up to one month. Before use, and prior to opening the vial we recommend that you allow your product to equilibrate to room temperature for at least 1 hour.

Need more advice on solubility, usage and handling? Please visit our frequently asked questions (FAQ) page for more details.

SMILES
C1CNCCNCCN(CC1)CC=C(C=C2)CN3CCCCNCCCCC3.Cl.Cl.Cl.Cl.Cl.Cl.Cl.Cl.Cl.Cl.Cl.

Source
Synthetic

2D chemical structure image of ab120718, AMD3100 octahydrochloride, CXCR4 antagonist

Uninfected control DCs were treated with MeAIB, MSO, inhibitors of CXCR4 (AMD3100), PI3K (LY294002, ab120243) or Rho kinase (Y27632, ab120129), or Gln starvation for 2 hours before assessing migration to 100 ng/ml SDF-1 α. Chemotactic index (CI) is defined as the fold increase in the number of migrating DCs to SDF-1 α over the spontaneous migration. One-way ANOVA reveals an effect of pharmacological treatments on the SDF-1 α-induced migration (F(6,44) = 6.700, P<0.001). Asterisks indicate P<0.05 (Dunnett’s post hoc).

Image from Lee IP, et al. Plos One, 9(10), e109803. Fig 3B; doi: 10.1371/journal.pone.0109803

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES, NOT FOR USE IN HUMANS"
Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit [https://www.abcam.com/abpromise](https://www.abcam.com/abpromise) or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors
- Abcam biochemicals are novel compounds and we have not tested their biological activity in house. Please use the literature to identify how to use these products effectively. If you require further assistance please contact the scientific support team