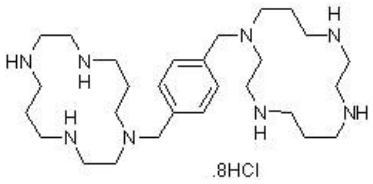
abcam

Product datasheet

AMD3100 octahydrochloride, CXCR4 antagonist ab120718

23 References 2 Images

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 IC_{50} 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 metastic 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	$C_{28}H_{54}N_8.8HCl$
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

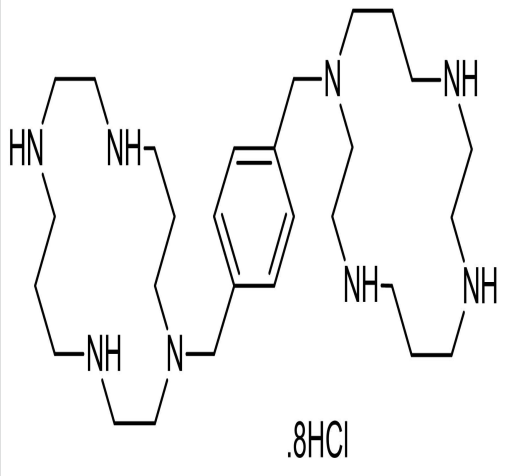
tightly sealed vials at -20°C. Generally, these will be useable for up to one month. Before use, and prior to opening the vial we recommend that you allow your product to equilibrate to room temperature for at least 1 hour.

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

SMILES C1CNCCNCCCN(CCNC1)CC2=CC=C(C=C2)CN3CCCNCCNCCCNCC3.Cl.Cl.Cl.Cl.Cl.Cl.Cl.Cl

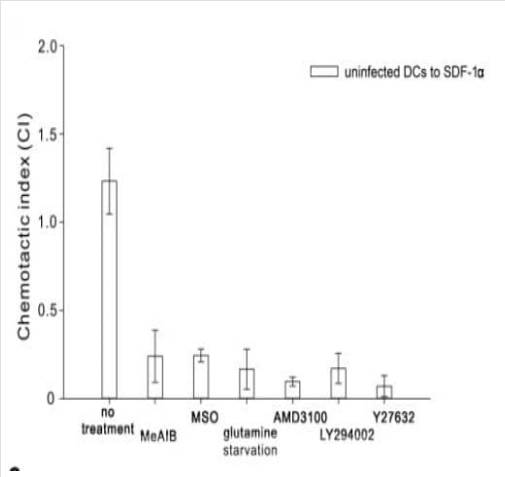
Source Synthetic

Images



Chemical Structure - AMD3100 octahydrochloride, CXCR4 antagonist (ab120718)

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



Cellular activation - AMD3100 octahydrochloride, CXCR4 antagonist (ab120718)

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

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).

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