Product Name: Plerixafor 8HCl (AMD3100 8HCl)

Revision Date: 6/30/2016

Product Data Sheet

Chemical Properties

<table>
<thead>
<tr>
<th><strong>Product Name:</strong></th>
<th>Plerixafor 8HCl (AMD3100 8HCl)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cas No.:</strong></td>
<td>155148-31-5</td>
</tr>
<tr>
<td><strong>M.Wt:</strong></td>
<td>794.47</td>
</tr>
<tr>
<td><strong>Formula:</strong></td>
<td>C28H62Cl8N8</td>
</tr>
<tr>
<td><strong>Chemical Name:</strong></td>
<td>1-[[4-(1,4,8,11-tetrazacyclotetradec-1-ylmethyl)phenyl][methyl]-1,4,8,11-tetrazacyclotetradecane;octahydrochloride</td>
</tr>
<tr>
<td><strong>Canonical SMILES:</strong></td>
<td>C1CNCCNCCCN(CCNC1)CC2=CC=C(C=C2)CN3CCCNCCNCCNCCN3.Cl.Cl.Cl.Cl.Cl.Cl.Cl</td>
</tr>
<tr>
<td><strong>Solubility:</strong></td>
<td>&gt;155.4mg/ml in H2O</td>
</tr>
<tr>
<td><strong>Storage:</strong></td>
<td>Store at -20°C</td>
</tr>
<tr>
<td><strong>General tips:</strong></td>
<td>For obtaining a higher solubility, please warm the tube at 37° C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20° C for several months.</td>
</tr>
<tr>
<td><strong>Shopping Condition:</strong></td>
<td>Evaluation sample solution: ship with blue ice&lt;br&gt;All other available size: ship with RT, or blue ice upon request</td>
</tr>
</tbody>
</table>

Biological Activity

<table>
<thead>
<tr>
<th><strong>Targets:</strong></th>
<th>GPCR/G protein</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pathways:</strong></td>
<td>CXCR</td>
</tr>
<tr>
<td><strong>Description:</strong></td>
<td>Plerixafor 8HCl (AMD3100 8HCl) is a potent and selective antagonist of CXCL12-mediated chemotaxis and G-protein coupled chemokine receptor (CXCR4) with IC50 values of 5.7 and 44 nM, respectively [1]. Plerixafor 8HCl has shown a high selectivity for CXCR4 compared other chemokine receptors including LTB4 CCR1, CCR2b, CCR4, CCR5, CCR7, CXCR3, etc [2]. Plerixafor 8HCl showed to inhibit I-SDF-1 ligand binding to CCRF–CEM T-lymphoblastoid cells</td>
</tr>
</tbody>
</table>
which express CXCR4. Plerixafor 8HCl has shown to block CXCR4 activation, SDF-1 mediated calcium flux and SDF-1 mediated chemotaxis with IC50 values of 27.3, 572 and 51 nM, respectively [2].

Reference:

Protocol

Cell experiment:

Cell lines
Bone marrow mononuclear cells (BMMCs)

Preparation method
Limited solubility. General tips for obtaining a higher concentration:
Please warm the tube at 37 ℃ for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20 ℃ for several months.

Reacting conditions

Applications
In BMMCs, AMD3100 neutralizes the osteoclast formation promoted by SDF-1α. AMD3100 could also diminish the expression of osteoclast-specific proteins elevated by SDF-1α.

Animal experiment [3]:

Animal models
8-10 week-old specified pathogen-free female C57BL/6 mice

Dosage form
3 mg/kg daily, i.p.

Other notes
Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.
Reference:

Caution
FOR RESEARCH PURPOSES ONLY.
NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.
Specific storage and handling information for each product is indicated on the product datasheet. Most ApexBio products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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