1. **Product description:**
BIO-5192 is a small molecule VLA-4 inhibitor. BIO-5192 has been shown to increase mobilization of murine hematopoietic stem and progenitors (HSPCs) over basal levels. An additive effect on HSPC mobilization (3-fold) was observed when plerixafor (AMD3100), a small molecule inhibitor of the CXCR4/SDF-1 axis, was combined with BIO5192. HSPCs mobilized by BIO5192 or the combination of BIO5192 and plerixafor has been shown to mobilize long-term repopulating cells, which successfully engraft and expand in a multilineage fashion in secondary transplantation recipients.

2. **CoA, QC data, SDS, and handling instruction**
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. **Solubility data**

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Max Conc. mg/mL</th>
<th>Max Conc. mM</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO</td>
<td>81.78</td>
<td>100.0</td>
</tr>
</tbody>
</table>

4. **Stock solution preparation table:**

<table>
<thead>
<tr>
<th>Concentration / Solvent Volume / Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>1.22 mL</td>
<td>6.11 mL</td>
<td>12.23 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.24 mL</td>
<td>1.22 mL</td>
<td>2.45 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.12 mL</td>
<td>0.61 mL</td>
<td>1.22 mL</td>
</tr>
<tr>
<td>50 mM</td>
<td>0.02 mL</td>
<td>0.12 mL</td>
<td>0.24 mL</td>
</tr>
</tbody>
</table>

5. **Molarity Calculator, Reconstitution Calculator, Dilution Calculator**
Please refer the product web page under section of “Calculator”

6. **Recommended literature which reported protocols for in vitro and in vivo study**
**In vitro study**

**In vivo study**

7. **Bioactivity**
**Biological target:**
BIO5192 is a selective and potent integrin α4β1 (VLA-4) inhibitor (Kd<10 pM).

**In vitro activity**
BIO5192 is a selective and potent small molecule inhibitor of VLA-4, with an affinity of 250- to 1000-fold higher than for the related α4β7 integrin. BIO5192 reduced both untreated and phorbol 12-myristate 13-acetate–stimulated cell binding to fibronectin-coated plates by 43% and 36%, respectively, indicating that BIO5192 blocks binding to multiple activation states of VLA-4 (Figure 1A; *P* < .001).


**In vivo activity**

First, rats were treated intravenously with BIO5192 (10 mg/kg) or with vehicle (controls) to assess effects of integrin blockade for 24 h or 72 h after thoracic clip-compression SCI. BIO5192 treatment significantly decreased the MPO enzymatic activity (neutrophil infiltration) and ED-1 expression (macrophage density) by 40% and 38% at 24 h and by 52% and 25% at 72 h post injury, respectively. In cord homogenates, BIO5192 treatment decreased expression of the oxidative enzymes gp91(phox), inducible nitric oxide and cyclooxygenase-2 by approximately 40% at both times of analysis.


*Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.*