Product Name: Indoximod (NLG-8189)  
Revision Date: 4/9/2019

Product Data Sheet

Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Name</td>
<td>Indoximod (NLG-8189)</td>
</tr>
<tr>
<td>Cas No.</td>
<td>110117-83-4</td>
</tr>
<tr>
<td>M.Wt</td>
<td>218.25</td>
</tr>
<tr>
<td>Formula</td>
<td>C12H14N2O2</td>
</tr>
<tr>
<td>Chemical Name</td>
<td>(E)-3'-methyl-3''-styryl-3,2':5',2'':5'',3'''-quaterpyridine</td>
</tr>
<tr>
<td>Canonical SMILES</td>
<td>OC(<a href="N">C@H</a>CC1=CN(C)C2=CC=CC=CC=C21)=O</td>
</tr>
<tr>
<td>Solubility</td>
<td>≥1.12mg/mL in H2O with ultrasonic and warming, &lt;2.18mg/mL in DMSO</td>
</tr>
<tr>
<td>Storage</td>
<td>Store at -20°C</td>
</tr>
<tr>
<td>General tips</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>
</tbody>
</table>
| Shopping Condition        | Evaluation sample solution: ship with blue ice  
All other available size: ship with RT, or blue ice upon request |

Biological Activity

<table>
<thead>
<tr>
<th>Targets</th>
<th>Metabolism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pathways</td>
<td>IDO</td>
</tr>
<tr>
<td>Description</td>
<td>Indoximod is an Indoleamine 2,3-dioxygenase (IDO) pathway inhibitor. IDO is a tryptophan-catabolizing enzyme that tumors use to create a state of immunosuppression. [1] The immunosuppressive activity of IDO leads to an increase in the number of T-regulatory cells, as measured by their Foxp3+/CD4+/CD25+ phenotype. Indoximod has also been shown to reduce the number of T-regulatory cells [2]. In MMTV-Neu mice, researchers looked at the activity of indoximod with and without paclitaxel [3]. The combination of docetaxel and indoximod is more toxic than docetaxel monotherapy. A single 1200 mg dose of indoximod almost totally saturates</td>
</tr>
</tbody>
</table>
the gut, and higher doses do not significantly increase peak serum levels. The single-agent phase I trial of indoximod demonstrated very good oral bioavailability and a mild toxicity profile with no significant myelosuppression, and no maximally tolerated dose was identified up to 2000 mg orally twice daily [1]. Blockade of IDO with indoximod enhanced the adoptive immunologic response to antigens and dendritic cell (DC) vaccines in LLC mouse models.

**Reference:**


## Protocol

### Cell experiment:

**Cell lines**

Treg cells

**Preparation method**

The solubility of this compound in DMSO is limited. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20 °C for several months.

**Reacting conditions**

**Applications**

Indoximod significantly inhibited the differentiation of Treg cells, especially that of IL-10+ Treg cells, whilst showed no effect on TGF-β1+ Treg cells. Treg cells co-cultured with Indoximod-pretreated ESCs exhibited less suppressive function. The results indicated that indoleamine 2,3-dioxygenase-1 (IDO1) was involved in the differentiation and suppressive function of Treg cells in endometriosis.

### Animal experiment [3]:

**Animal models**

Mice bearing 4T1 tumors

**Dosage form**

400 mg/kg; p.o.; b.i.d., 5 times a week

**Applications**

In mice bearing 4T1 tumors, DL-Indoximod in combination with...
Cyclophosphamide enhanced antitumor immunity. In addition, the drug combination induced a marked decrease in tumor size. Compared with the combination of L-Indoximod and Cyclophosphamide, D-Indoximod combined with Cyclophosphamide significantly prolonged the survival period.

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.