Wnt Antagonist Wnt-C59

Chemical Name: 2-(4-(2-methylpyridin-4-yl)phenyl)-N-(4-(pyridin-3-yl)phenyl)acetamide

<table>
<thead>
<tr>
<th>Molecular Weight</th>
<th>379.45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula</td>
<td>C_{25}H_{21}N_{3}O</td>
</tr>
<tr>
<td>Purity</td>
<td>≥98%</td>
</tr>
<tr>
<td>CAS#</td>
<td>1243243-89-1</td>
</tr>
<tr>
<td>Solubility</td>
<td>DMSO up to 50 mM</td>
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</table>
| Storage          | Powder: 4°C 1 year  
                    DMSO: 4°C 3 month  
                    -20°C 1 year |

Biological Activity:

Wnt-C59 is a very potent and highly selective Wnt signaling antagonist with an IC_{50} ~ 74 pM in the Wnt signaling reporter assay. It prevents palmitylation of Wnt proteins by Porcupine (a membrane-bound O-acyltransferase), thereby blocking Wnt protein secretion and activity. Wnt-C59 displayed good bioavailability as once daily oral administration and blocked progression of mammary tumors in MMTV-WNT1 transgenic mice model while downregulating Wnt/β-catenin target genes. Because Wnt-C59 exhibits much better potency and selectivity than the reported IWP series of Porcupine/Wnt inhibitors, it serves as the better Wnt pathway inhibitor for in vitro and in vivo studies.

How to Use:

**In vitro:** Wnt-C59 was used at 0.1-0.2 µM to completely block Wnt protein secretion. When used at 0.5 µM, it can be used functionally replace the Dkk protein in many assay conditions

**In vivo:** Wnt-C59 was used to dose mice orally at 5-10 mg/kg once per day or 5 mg/kg twice per day.

Reference:


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