**Chemical Properties**

**Product Name:** Rimonabant  
**Cas No.:** 168273-06-1  
**M.Wt:** 463.79  
**Formula:** C22H21Cl3N4O  
**Chemical Name:** 5-(4-chlorophenyl)-1-(2,4-dichlorophenyl)-4-methyl-N-piperidin-1-yl pyrazole-3-carboxamide  
**Canonical SMILES:** CC1=C(N(N=C1C(=O)NN2CCCC2)C3=C(C=C(C3)Cl)Cl)C4=CC=C(C=C4)Cl  
**Solubility:** >23.2mg/mL in DMSO  
**Storage:** Store at -20°C  
**General tips:** 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.  
**Shopping Condition:** Evaluation sample solution: ship with blue ice  
All other available size: ship with RT, or blue ice upon request

**Biological Activity**

**Targets:** Cannabinoid Receptor  
**Pathways:** GPCR/G protein >> Cannabinoid Receptor

**Description:**
Rimonabant (SR141716) is a potent and selective antagonist of central cannabinoid (CB1) receptor with Ki values of 1.8nM and 514nM for CB1 and CB2, respectively [1]. Rimonabant (SR141716) has shown a 285-fold CB1 selectivity (Ki=1.8nM CB1, 514nM CB2). The affinity of Rimonabant for CB1-Rs is 50-fold higher than for CB2-Rs with a Ki value of 6.18nM for CB1-Rs [1]. In addition, Rimonabant has been revealed to produce changes in ingestive behaviors when treatment alone. Moreover Rimonabant has been reported to selectively reduce the
consumption of palatable food and drink. Rimonabant has also been noted to decrease sucrose intake in rat, alcohol consumption in mice and sweet diet intake in marmosets when having little effect on bland food consumption [2].

**Reference:**


### Protocol

**Cell experiment:**

<table>
<thead>
<tr>
<th>Cell lines</th>
<th>Peripheral blood mononuclear cells (PBMC); keratinocyte cell line (C5N cells)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation method</td>
<td>The solubility of this compound in DMSO is &gt;10 mM. 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.</td>
</tr>
<tr>
<td>Reacting conditions</td>
<td>Animal experiment [2]:Animal modelsMale CD-1 mice modelDosage form0.1,0.3, and 1.0μmol·cm-2 for 6 h or 24 h</td>
</tr>
<tr>
<td>Applications</td>
<td>Treatment with rimonabant in peripheral blood mononuclear cells (PBMC) did not induce significant changes of monocytes, B cells, total T cells or T cell subsets. Moreover, there was a small but significant increase in CD16+, CD3−, and/or CD56+ cells after rimonabant therapy. Additionally, Rimonabant reduced keratinocyte cell line (C5N cells) viability by induction of apoptosis.</td>
</tr>
</tbody>
</table>

**Animal experiment [3]:**

<table>
<thead>
<tr>
<th>Animal models</th>
<th>Male CD-1 mice model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosage form</td>
<td>0.1,0.3, and 1.0μmol·cm-2 for 6 h or 24 h</td>
</tr>
<tr>
<td>Applications</td>
<td>Rimonabant significantly reduced oedema and leukocyte infiltrate, and showed topical anti-inflammatory activity in mice.</td>
</tr>
<tr>
<td>Other notes</td>
<td>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.</td>
</tr>
</tbody>
</table>
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. Shortterm 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.