L-161982 is a selective EP4 receptor antagonist. L-161982 completely blocks PGE2-induced ERK phosphorylation and cell proliferation of HCA-7 cells. L-161982 alleviates collagen-induced arthritis in mice[1][2].

**In Vitro**

L-161982 (10 μM; 2 hours) blocks PGE2-stimulated cell proliferation of HCA-7 cells[1].

L-161982 (10 μM; 1 hour) blocks PGE2-stimulated ERK phosphorylation in HCA-7 cells[1].

L-161982 induces apoptosis, cell cycle arrest, and inhibits prostaglandin E2-induced proliferation in oral squamous carcinoma Tca8113 cells[3].

**Cell Proliferation Assay[1]**

<table>
<thead>
<tr>
<th>Cell Line</th>
<th>HCA-7 cells</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration:</td>
<td>10 μM</td>
</tr>
<tr>
<td>Incubation Time:</td>
<td>2 hours</td>
</tr>
<tr>
<td>Result:</td>
<td>Blocked PGE2-induced cell proliferation.</td>
</tr>
</tbody>
</table>

**In Vivo**

L-161982 (5 mg/kg; i.p.; once per day for 2 weeks) reduces arthritis lesions and lesion progression in CIA mice[2].

**Animal Model:** Female DBA/1 mice of 6 to 8 weeks old (collagen-induced arthritis (CIA) mice model)

**Dosage:** 5 mg/kg

**Administration:** i.p.; once per day for 2 weeks

**Result:** Showed less joint swelling and lower arthritis score after 35 days post immunization.
