Web: www.taiclone.com
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# AC-55541

## Catalog No: tcsc3417

### Available Sizes

**Size:** 5mg

**Size:** 10mg

**Size:** 50mg

### Specifications

**CAS No:**
916170-19-9

**Formula:**
$C_{25}H_{20}BrN_5O_3$

**Pathway:**
GPCR/G Protein

**Target:**
Protease-Activated Receptor (PAR)

**Purity / Grade:**
>98%

**Solubility:**
DMSO : ≥ 51 mg/mL (98.39 mM)

**Observed Molecular Weight:**
518.36

## Product Description

AC-55541 is a novel small-molecule protease-activated receptor 2(PAR2) agonist; activated PAR2 signaling in cellular proliferation assays, phosphatidylinositol hydrolysis assays, and Ca(2+) mobilization assays, with potencies ranging from 200 to 1000 nM.

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IC50 value: 200-1000 nM(EC50) [1]

Target: PAR2 agonist

Neither AC-55541 nor AC-264613 had activity at any of the other PAR receptor subtypes, nor did they have any significant affinity for over 30 other molecular targets involved in nociception. Visualization of EYFP-tagged PAR2 receptors showed that each compound stimulated internalization of PAR2 receptors. AC-55541 was well absorbed when administered intraperitoneally to rats, reaching micromolar peak plasma concentrations. AC-55541 was stable to metabolism by liver microsomes and maintained sustained exposure in rats, with elimination half-lives of 6.1 h. Intrapaw administration of AC-55541 or AC-264613 elicited robust and persistent thermal hyperalgesia and edema. Coadministration of either a tachykinin 1 (neurokinin 1) receptor antagonist or a transient receptor potential vanilloid (TRPV) 1 antagonist completely blocked these effects. Systemic administration of either AC-55541 or AC-264613 produced a similar degree of hyperalgesia as was observed when the compounds were administered locally.