Web: www.taiclone.com
Tel: +886-2-2735-9682
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AR 231453

Catalog No: tcsc2475

Available Sizes

Size: 5mg

Size: 10mg

Specifications

CAS No:
733750-99-7

Formula:
$C_{21}H_{24}FN_7O_5S$

Pathway:
GPCR/G Protein

Target:
GPR119

Purity / Grade:
>98%

Solubility:
H2O : 60 mg/mL (118.69 mM; Need ultrasonic and warming); DMSO : ≥ 60 mg/mL (118.69 mM)

Observed Molecular Weight:
505.52

Product Description

AR231453 is a potent and selective small molecule agonist of GPR119 that enhances glucose-dependent insulin secretion and glucagon-like peptide 1 (GLP-1) release; Antidiabetic agent.

IC50 value:

Target: GPR119

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in vitro: The GPR119-specific agonist AR231453 significantly increased cAMP accumulation and insulin release in both HIT-T15 cells and rodent islets. In both cases, loss of GPR119 rendered AR231453 inactive [1]. In GLUTag cells, a well-established model of intestinal L-cell function, the potent GPR119 agonist AR231453 stimulated cAMP accumulation and GLP-1 release [2].

in vivo: AR231453 also enhanced glucose-dependent insulin release in vivo and improved oral glucose tolerance in wild-type mice but not in GPR119-deficient mice. Diabetic KK/A(y) mice were also highly responsive to AR231453. Orally active GPR119 agonists may offer significant promise as novel antihyperglycemic agents acting in a glucose-dependent fashion [1]. When administered in mice, AR231453 increased active GLP-1 levels within 2 min after oral glucose delivery and substantially enhanced total glucose-dependent insulinotropic peptide levels. Blockade of GLP-1 receptor signaling with exendin(9-39) reduced the ability of AR231453 to improve glucose tolerance in mice [2].