

# **PI4KIII beta inhibitor 3**

## Catalog No: tcsc1460

Available Sizes

Size: 2mg

Size: 5mg

Size: 10mg

Specifications

#### CAS No:

1245319-54-3

#### Formula:

C<sub>22</sub>H<sub>22</sub>N<sub>8</sub>OS

#### Pathway:

PI3K/Akt/mTOR

#### **Target:**

PI4K

**Purity / Grade:** 

Solubility: DMSO : 20 mg/mL (44.79 mM; Need ultrasonic)

#### **Observed Molecular Weight:**

446.53

### **Product Description**

PI4KIII beta inhibitor 3 is a novel and high effective **PI4KIII** $\beta$  inhibitor with **IC**<sub>50</sub> of 5.7 nM.

IC50 & Target: IC50: 5.7 nM (PI4K)<sup>[1]</sup>

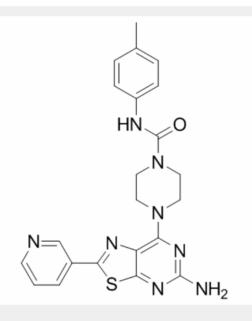
In Vitro:

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PI4KIII beta inhibitor 3 is a PI4KIII inhibitor extracted from patent WO/2013034738 A1, the compound of formula 3, has an IC<sub>50</sub> of 5.7 nM. PI4KIII beta inhibitor 3 exerts significant immunosuppressive activity, with IC<sub>50</sub> value of 3 nM in the mixed lymphocyte reaction (MLR) assay. PI4KIII beta inhibitor 3 inhibits IL2 and IFNy secretion with IC<sub>50</sub> values of less than InM in each case. Thus, PI4KIII beta inhibitor 3 is shown to be as effective at inhibiting IL2 and IFNy secretion as conventional immunosuppressants such as cyclosporine A. IC<sub>50</sub> on IFNy and IL-2 release of Cyclosporine A are 2nM and less than 1 nM respectively<sup>[1]</sup>.

*In Vivo:* PI4KIII beta inhibitor 3 (40 mg/kg per day, n=12) is able to delay the onset of arthritic symptoms and also to decrease symptom severity in a preventive model of arthritis compared to a vehicle control (MC 1%, n=12). PI4KIII beta inhibitor 3 reduces the anti-CII IgG titre and histological scores in the collagen-induced arthritis mouse model. Oral administration of PI4KIII beta inhibitor 3 results in prolonged graft survival in 3 out of 6 grafts in each group at day 30. Several grafts continued beating after withdrawal of the treatment (up to 60 days), indicating the induction of a certain type of graft tolerance. To evaluate the operational tolerance phenotype, animals with functional graft at day 60 are challenged with a second graft from the same donor strain or from a third party. No treatment is applied. The second grafts from the third party are rejected at day 8 (n=2) whereas second grafts from the same donor strain are functional for more than 90 days (n=2)<sup>[1]</sup>.



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