
Product Data Sheet

Product Name: 10-Cl-BBQ

Cat. No.: GC50422

Chemical Properties

Cas. No. 23982-76-5

SMILES C1C=CC2=C(N=C3N2C(C4=CC=CC5=C4C3=CC=C5)=O)C=C1Formula C₁₈H₉ClN₂O

M.Wt 304.73

Solubility DMSO : 1.67 mg/mL (5.48 mM; ultrasonic and warming and heat to 60°C)

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.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure **Background**

Potent aryl hydrocarbon receptor (AhR) agonist, discovered as a screening hit (IC₅₀ = 2.6 nM). Directly binds CD4⁺ T cells to induce AhR-dependent Tregs. Suppresses IL-17 production and prevents insulinitis in NOD mice. In vivo half life ~ 2 hours, orally bioavailable.

Punj et al (2014) Benzimidazoisoquinolines: a new class of rapidly metabolized aryl hydrocarbon receptor (AhR) ligands that induce AhR-dependent Tregs and prevent murine graft-versus-host disease. PLoS One 9 e88726 PMID:24586378 | Ehrlich et al (2016) Activation of the aryl hydrocarbon receptor by 10-Cl-BBQ prevents insulinitis and effector T cell development independently of Foxp3⁺ regulatory T Cells in nonobese diabetic mice. J.Immunol. 196 264 PMID:26573835

Caution: Product has not been fully validated for medical applications. For research use only.

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