

Product Name: 10-Cl-BBQ

Catalog No.: 6321

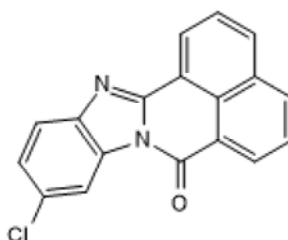
Batch No.: 1

CAS Number: 23982-76-5

IUPAC Name: 10-Chloro-7*H*-benzimidazo[2,1-*a*]benz[*de*]isoquinolin-7-one

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₈H₉ClN₂O
Batch Molecular Weight: 304.73
Physical Appearance: Yellow solid
Solubility: DMSO to 1 mM with gentle warming
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 97% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	70.95	2.98	9.19
Found	71.04	2.89	9.14

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

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.

Physical and Chemical Properties:

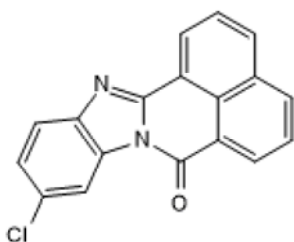
Batch Molecular Formula: C₁₈H₉ClN₂O

Batch Molecular Weight: 304.73

Physical Appearance: Yellow solid

Minimum Purity: >97%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 1 mM with gentle warming

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

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.

Punj et al (2014) Benzimidazoisquinolines: 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.

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