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## Product Data Sheet

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Product Name: BBIQ  
Cat. No.: GC68743

### Chemical Properties

Cas. No. 1229024-57-0

Formula  $C_{21}H_{22}N_4$  M.Wt 330.43

Solubility DMSO : 16.67 mg/mL (50.45 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

BBIQ is a imidazoquinoline compound and a potent and selectively **TLR7**. BBIQ is a powerful vaccine adjuvant that enhances innate immune responses<sup>[1][2]</sup>.

BBIQ induces IFN- $\alpha$  in human PBMCs (520?pg/mL at 5? $\mu$ g/mL)<sup>[1]</sup>.

In mice treated with Chloroquine (CQ) alone, parasite (*P. berghei* ANKA) appeared on Day 17 and all mice of this group died by Day 21. Whereas, mice treated with BBIQ along with CQ exhibits no appearance of parasite till Day 23. Frequencies of T cells (CD3+, CD4+ and CD8+) and T regulatory cells (CD4+, CD25 + and FoxP3+) are lower in brain of BBIQ?+?CQ treated mice as compared to BBIQ alone and CQ alone treated mice on Day 10. Inhibition of infiltration of inflammatory T cells and activation of T helper and T cytotoxic cells against the parasite is observed in the mice treated with this combination therapy. Serum levels of IFN- $\gamma$  and IL-12 are higher on same day in mice treated with BBIQ?+?CQ which reveals the generation of strong Th1 immune response in mice against the infection<sup>[1]</sup>.

[1]. Saroa R, et al. Efficacy of TLR7 agonistic imidazoquinoline as

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

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immunochemotherapeutic agent against P. Berghei ANKA infected rodent host. Bioorg Med Chem Lett. 2019 May 1;29(9):1099-1105.

[2]. Kaushik D, et al. BBIQ, a pure TLR7 agonist, is an effective influenza vaccine adjuvant. Hum Vaccin Immunother. 2020 Apr 16:1-8.

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