

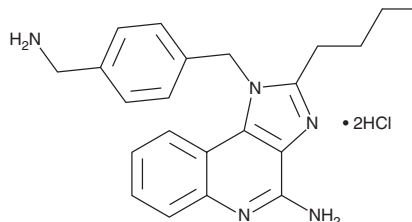
PRODUCT INFORMATION



TLR7/8 Agonist 1 (hydrochloride)

Item No. 28451

CAS Registry No.: 1620278-72-9
Formal Name: 1-[[4-(aminomethyl)phenyl]methyl]-2-butyl-1H-imidazo[4,5-c]quinolin-4-amine, dihydrochloride
Synonym: Toll-Like Receptor 7/8 Agonist 1
MF: C₂₂H₂₅N₅ • 2HCl
FW: 432.4
Purity: ≥98%
UV/Vis.: λ_{max}: 229, 247, 310, 323 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

TLR7/8 agonist 1 (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the TLR7/8 agonist 1 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. TLR7/8 agonist 1 (hydrochloride) is soluble in the organic solvent DMSO.

Description

TLR7/8 agonist 1 is a dual agonist of toll-like receptor 7 (TLR7) and TLR8 (EC₅₀s = 50 and 55 nM, respectively, in cell-based assays).¹ It increases the levels of TNF-α, IFN-γ, IL-12p40, and chemokine (C-C motif) ligand 4 (CCL4) in human peripheral blood mononuclear cells (PBMCs) in a biphasic manner. TLR7/8 agonist 1 (25 nmol, s.c.) increases serum levels of IL-12p40 and chemokine (C-X-C motif) ligand 10 (CXCL10), as well as the number of dendritic cells per injection-site proximal lymph node, in mice.² It has been conjugated to various fluorophores as TLR7 probes and to polymer particles for the modulation of TLR7/8 agonist 1 adjuvant activity.^{2,3}

References

1. Beesu, M., Caruso, G., Salyer, A.C., *et al.* Structure-based design of human TLR8-specific agonists with augmented potency and adjuvanticity. *J. Med. Chem.* **58**(19), 7833-7849 (2015).
2. Lynn, G.M., Chytil, P., Francica, J.R., *et al.* Impact of polymer-TLR-7/8 agonist (adjuvant) morphology on the potency and mechanism of CD8 T cell induction. *Biomacromolecules* **20**(2), 854-870 (2019).
3. Shukla, N.M., Mutz, C.A., Ukani, R., *et al.* Syntheses of fluorescent imidazoquinoline conjugates as probes of Toll-like receptor 7. *Bioorg. Med. Chem. Lett.* **20**(22), 6384-6386 (2010).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 05/12/2023

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM