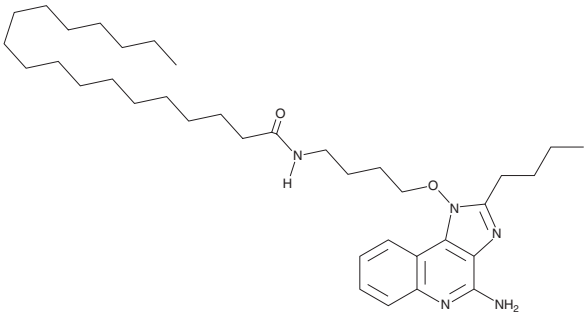
PRODUCT INFORMATION

Telratolimod

Item No. 33172

CAS Registry No.:	1359993-59-1
Formal Name:	N-[4-[(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)oxy]butyl]-octadecanamide
Synonyms:	MEDI9197, 3M-052
MF:	$C_{36}H_{59}N_5O_2$
FW:	593.9
Purity:	≥98%
UV/Vis.:	λ_{max}: 248 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

Telratolimod is supplied as a crystalline solid. A stock solution may be made by dissolving the telratolimod in the solvent of choice, which should be purged with an inert gas. Telratolimod is slightly soluble in ethanol and DMSO.

Description

Telratolimod is an agonist of toll-like receptor 7 (TLR7) and TLR8.[1] It increases the production of IL-8 in HEK293 cells expressing human TLR7 or TLR8 and increases protein levels of IFN-α and TNF-α in isolated human peripheral blood mononuclear cells (PBMCs). Telratolimod (1 mg/kg) increases the HA-induced secretion of IFN-γ in mouse splenocytes *ex vivo* but does not induce the production of TNF-α in mouse serum *in vivo*. Telratolimod nanoparticles, when used as an adjuvant with the HIV-1 envelope glycoprotein, enhance neutralizing antibody responses to an HIV-1 pseudovirus in rhesus macaques for at least one year.[2] Intratumoral administration of telratolimod reduces tumor growth and increases metastasis-free survival in E0771 and 4T1.2 murine mammary carcinoma models and increases intratumoral production of cytokines in a 4T1.2 murine model, an effect that is enhanced by coadministration of anti-PD-1 antibodies.[3]

References

1. Smirnov, D., Schmidt, J.J., Capecchi, J.T., *et al*. Vaccine adjuvant activity of 3M-052: An imidazoquinoline designed for local activity without systemic cytokine induction. *Vaccine* **29(33)**, 5434-5442 (2011).
2. Kasturi, S.P., Rasheed, M.A.U., Havenar-Doughton, C., *et al*. 3M-052, a synthetic TLR-7/8 agonist, induces durable HIV-1 envelope–specific plasma cells and humoral immunity in nonhuman primates. *Sci. Immunol.* **5(48)**, eabb1025 (2020).
3. Zanker, D.J., Spurling, A.J., Brockwell, N.K., *et al*. Intratumoral administration of the toll-like receptor 7/8 agonist 3M-052 enhances interferon-driven tumor immunogenicity and suppresses metastatic spread in preclinical triple-negative breast cancer. *Clin. Transl. Immunology* **9(9)**, e1177 (2020).

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