

Catalog # 10-4920 Motolimod

CAS# 926927-61-9 2-Amino-N,N-diipropyl-8-[4-(pyrrolidine-1-carbonyl)phenyl]-3H-1-benzapine-4-carboxamide; VTX-2337 Lot # FBS2006



Motolimod is a selective Toll-like receptor 8 (TLR8) agonist (EC₅₀ = 100 nM). It stimulates the production of TNF α and IL-12 from monocytes and myeloid dendritic cells. Motolimod also stimulated IFN γ production from NK cells and increased their toxicity against K562 and ADCC by rituximab and trastuzumab.1,2 It induced apoptosis in monocytic myeloid-derived suppressor cells.3 Motolimod is being investigated in combination with other cancer immunotherapies.4,5 Motolimod has also been shown in induce secreted IL-1b and IL-8 via activation of the NLRP3 inflammasome.⁶

- 1) Lu et al. (2012), VTX-2337 is a Novel TLR8 Agonist That Activates NK Cells and Augments ADCC; Clin.Cancer Res. 18 499
- 2) Lu et al. (2013), TLR8 agonist VTX-2337 enhances NKG2D-mediated cytotoxicity of NK cells; J.Immunother.Cancer 1 P44
- 3) Rutman *et al.* (2015), Motolimod, a selective TLR8 agonist, induces apoptosis in monocytic myeloid-derived suppressor cells (M-MDSC); J.Immunother.Cancer. **3** P296
- Ferris et al. (2014), Active8: a random, double-blind, placebo-controlled study of chemotherapy plus cetuximab in combination with TLR8 agonist VTX-2337 in patients with recurrent or metastatic squamous cell carcinoma of the head and neck (SCCHN); J.Immunother.Cancer 2 P69
- 5) Monk *et al.* (2017), Integrative Development of a TLR8 Agonist for Ovarian Cancer Chemo-Immunotherapy; Clin.Cancer Res. **23** 1955
- 6) Dietsch et al. (2016), Coordinated Activation of Toll-Like Receptor8 (TLR8) and NLRP3 by the TLR8 Agonist, VTX-2337, Ignites Tumoricidal Natural Killer Cell Activity; PLoS One **11** e0148764

PHYSICAL DATA

Molecular Weight:	458.61
Molecular Formula:	C ₂₈ H ₃₄ N ₄ O ₂
Purity:	>98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (>25 mg/ml)
Physical Description:	Off-white/pale yellow solid
Storage and Stability:	Store as supplied at -20°C for up to 1 year from the date of purchase. Solutions i
	DMSO may be stored at -20°C for up to 1 month.

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