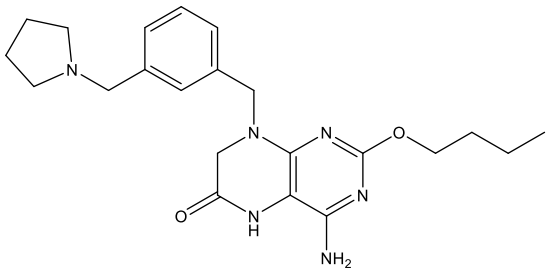
Catalog # 10-4921

Vesatolimod

4-Amino-2-butoxy-8-[[3-(pyrrolidine-1-ylmethyl)phenyl]methyl]-5,7-dihydropteridin-6-one; GS-9620

CAS# 1228585-88-3

Lot # FBS2183



Vesatolimod is a Toll-like receptor 7 (TLR7) agonist (EC_{50} = 290 nM in a HEK293 cell line reporter assay; IFNα MEC 3 nM, 100 fold selectivity over TNFα activation).[1] Displays significant antiviral activity *via* immune activation against HIV[2,3], Hepatitis B[4,5], Norovirus[6], and enterovirus[7].

1) Roethle *et al.* (2013), *Identification and Optimization of Toll-like Receptor 7 (TLR7) Agonists for the Oral treatment of Viral Hepatitis;* J. Med. Chem. **56** 7324
2) Martinsen *et al*. (2020), *The Use of Toll-like Receptor Agonists in HIV-1 Cure Strategies*; Front. Immunol. **11** 1112
3) Riddler *et al*. (2021), *Vesatolimod, a Toll-like Receptor 7 Agonist, Induces Immune Activation in Virally Suppressed Adults Living With Human Immunodeficiency Virus-1*; Clin. Infect. Dis. **72** e815
4) Agarwal *et al.* (2018), *Safety and efficacy of vesatolimod (GS-9620) in patients with chronic hepatitis B who are not currently on antiviral treatment*; J.Viral Hepat. **25** 1331
5) Niu *et al*. (2018), *Toll-like receptor 7 agonist GS-9620 induces prolonged inhibition of HBV vias a type I interferon-dependent mechanism*; J. Hepatol. **68** 922
6) Tuipulotu *et al.* (2018), *TLR7 Agonists Display Potent Antiviral Effects against Norovirus Infection via Innate Stimulation*; Antimicrob. Agents Chemother., **62** e02417
7) Zhang *et al.* (2018), *GS-9620 inhibits enterovirus 71 replication mainly through the NF-kappaB and PI3K-AKT signaling pathways*; Antiviral Res., **153** 39

PHYSICAL DATA

Molecular Weight:	410.52
Molecular Formula:	$C_{22}H_{30}N_6O_2$
Purity:	98% by HPLC
	NMR: Conforms
Solubility:	DMSO (10 mg/mL)
Physical Description:	Off-white solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 1 year from the date of purchase.
	Solutions in DMSO may be stored at -20°C for up to 3 months.