

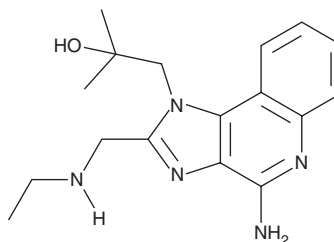
PRODUCT INFORMATION



Gardiquimod

Item No. 18877

CAS Registry No.: 1020412-43-4
Formal Name: 4-amino-2-[(ethylamino)methyl]-
α,α-dimethyl-1H-imidazo[4,5-c]
quinoline-1-ethanol
MF: C₁₇H₂₃N₅O
FW: 313.4
Purity: ≥95%
UV/Vis.: λ_{max}: 249, 328 nm
Supplied as: A crystalline 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

Gardiquimod is supplied as a crystalline solid. A stock solution may be made by dissolving the gardiquimod in the solvent of choice, which should be purged with an inert gas. Gardiquimod is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of gardiquimod in ethanol is approximately 12 mg/ml and approximately 20 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of gardiquimod can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of gardiquimod in PBS, pH 7.2, is approximately 0.2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Gardiquimod is an agonist of human toll-like receptor 7 (TLR7), but not human TLR8, although it activates both porcine TLR7 and TLR8.¹ At 0.5 to 2 µg/ml, it enhances the immunosuppressive activity of T regulatory cells.² Gardiquimod is effective as a mucosal adjuvant for Norwalk virus-like particles and inhibits infection of macrophages and T cells by HIV-1.^{3,4} It inhibits proliferation and migration while inducing apoptosis in pancreatic cancer cells *in vitro*.⁵

References

1. Zhu, J., Lai, K., Bronile, R., *et al.* *Mol. Immunol.* **45**(11), 3238-3243 (2008).
2. Forward, N.A., Furlong, S.J., Yang, Y., *et al.* *J. Leukoc. Biol.* **87**(1), 117-125 (2010).
3. Velasquez, L.S., Hjelm, B.E., Arntzen, C.J., *et al.* *Clin. Vaccine Immunol.* **17**(12), 1850-1858 (2010).
4. Buitendijk, M., Eszterhas, S.K., and Howell, A.L. *AIDS Res. Hum. Retroviruses* **29**(6), 907-918 (2013).
5. Zou, B.B., Wang, F., Li, L., *et al.* *Mol. Med. Rep.* **12**(4), 6079-6085 (2015).

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.

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