Resiquimod (GMP)

Cat. No.: HY-13740G

CAS No.: 144875-48-9

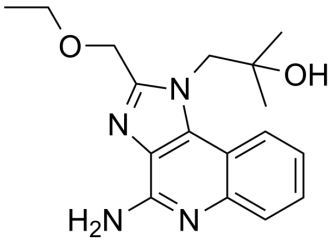
Molecular Formula: $C_{17}H_{22}N_4O_2$

Molecular Weight: 314.38

Target: Toll-like Receptor (TLR)

Pathway: Immunology/Inflammation

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Resiquimod (R848) (GMP) is Resiquimod (HY-13740) produced by using GMP guidelines. GMP small molecules work appropriately as an auxiliary reagent for cell therapy manufacture. Resiquimod is a Toll-like receptor 7 and 8 (TLR7/TLR8) agonist. Resiquimod (GMP) can induce human mMDSC to mature into inflammatory macrophages[1][2][3].	
IC_{50} & Target	TLR7	TLR8
In Vitro	Resiquimod (GMP) (3 μg/mL, 5 days) induces human mMDSC to mature into inflammatory macrophage (MAC_{inflam})[1]. Resiquimod (GMP) (3 μg/mL, 3 days) produces IL-6 and IL-12 in human mMDSC[1]. Resiquimod (GMP) (2.5 μg/mL, 7 days) transdifferentiaes memory B cells to IgG producing plasma cells[2]. Resiquimod (GMP) (5 μg/mL, 5 days) induces the differentiation of MDSCs into mature myeloid cells[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.	

CUSTOMER VALIDATION

- Nat Nanotechnol. 2023 Jan 12.
- Adv Mater. 2024 Jan 31:e2308155.
- Adv Mater. 2024 Jan 25:e2310421.
- Adv Mater. 2022 Nov 25;e2208782.
- Nat Biomed Eng. 2018 Aug;2(8):578-588.

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REFERENCES

[1]. Bayik D, et al. Factors Influencing the Differentiation of Human Monocytic Myeloid-Derived Suppressor Cells Into Inflammatory Macrophages. Front Immunol. 2018 Mar 26;9:608.

[2]. Preisendörfer S, et al. FK506-Binding Protein 11 Is a Novel Plasma Cell-Specific Antibody Folding Catalyst with Increased Expression in Idiopathic Pulmonary Fibrosis. Cells. 2022 Apr 14;11(8):1341.

[3]. Lee M, et al. Resiquimod, a TLR7/8 agonist, promotes differentiation of myeloid-derived suppressor cells into macrophages and dendritic cells. Arch Pharm Res. 2014;37(9):1234-40.

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