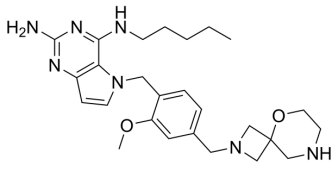
TLR7/8 agonist 7

Cat. No.:	HY-147236
CAS No.:	2567953-47-1
Molecular Formula:	$C_{26}H_{37}N_7O_2$
Molecular Weight:	479.62
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

TLR7/8 agonist 7 (compound 10) is a TLR7/8 agonist. TLR7/8 agonist 7 activates a variety of immune cells and it can be used to synthesize immune stimulating antibody conjugate (ISAC) molecules. TLR7/8 agonist 7 can be used for the research of immunity[1].

In Vitro

TLR7/8 agonist 7 (compound 10) (0-1 μM; 24 h) is a TLR7 agonist and shows selectivity to TLR7[1].
TLR7/8 agonist 7 (compound 10) (0-1 μM; 120 h) shows no cytotoxicity to KB cells[1].
TLR7/8 agonist 7 (compound 10) (0.01, 0.1, 1, 10, 100 and 1000 nM; 48 h) induces immune cells activation[1].
TLR7/8 agonist 7 (compound 10) (0.1, 1, 10, 100 and 1000 nM; 24-48 h) induces cytokine release[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	HEK293-humanTLR7 (hTLR7), HEK293-mouseTLR7 (mTLR7) and HEK293-humanTLR8 (hTLR8) cell lines
Concentration:	0-1000 nM
Incubation Time:	24 h
Result:	Showed selectivity to TLR7 and TLR8 as an agonist with EC_{50}s of 1.5, 341.7 and 3.7nM in hTLR7, hTLR8 and mTLR7, respectively at 24 h.

Cell Cytotoxicity Assay[1]

Cell Line:	KB cells
Concentration:	0-1000 nM
Incubation Time:	120 h
Result:	Exhibited no cytotoxicity to KB cells though until concentration up to 1 μM.

Cell Viability Assay[1]

Cell Line:	Human peripheral blood mononuclear cells (PBMCs), cyno PBMCs and mouse splenocytes

Concentration:	0.01, 0.1, 1, 10, 100 and 1000 nM
Incubation Time:	48 h
Result:	Activated immune cells (monocyte, B cell, and DCs) in human PBMCs, cyno PBMCs and mouse splenocytes.

Cell Viability Assay[1]

Cell Line:	Human peripheral blood mononuclear cells (PBMCs), cyno PBMCs and mouse splenocytes
Concentration:	0.1, 1, 10, 100 and 1000 nM
Incubation Time:	24 and 48 h
Result:	Stimulated IL-6 , MCP-I , and ILlRa release from human PBMCs, IL-6 and MCP-I release from cyno PBMCs, as well as IL-6 , MCP-I , TNFa and IP-10 release from mouse splenocytes.

REFERENCES

[1]. Maderna, et al. 5H-PYRROLO[3,2-d]PYRIMIDINE-2,4-DIAMINO COMPOUNDS AND ANTIBODY CONJUGATES THEREOF. WO/2020/252043.

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