

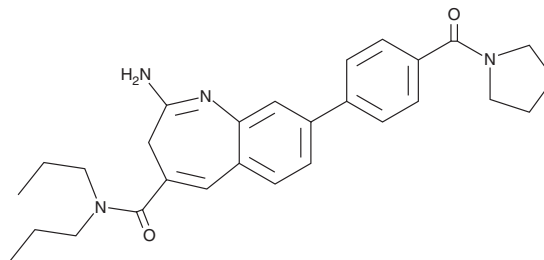
# PRODUCT INFORMATION



## Motolimod

Item No. 22952

**CAS Registry No.:** 926927-61-9  
**Formal Name:** 2-amino-N,N-dipropyl-8-[4-(1-pyrrolidinylcarbonyl)phenyl]-3H-1-benzazepine-4-carboxamide  
**Synonym:** VTX-2337  
**MF:** C<sub>28</sub>H<sub>34</sub>N<sub>4</sub>O<sub>2</sub>  
**FW:** 458.6  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 270 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

Motolimod is supplied as a crystalline solid. A stock solution may be made by dissolving the motolimod in the solvent of choice, which should be purged with an inert gas. Motolimod is soluble in the organic solvent DMSO at a concentration of approximately 2 mg/ml.

Motolimod is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, motolimod should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Motolimod has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Motolimod is an agonist of toll-like receptor 8 (TLR8).<sup>1</sup> It increases the production of TNF-α and IL-12 in human peripheral blood mononuclear cells (PBMCs; EC<sub>50</sub>s = 140 and 120 nM, respectively), monocytes, and myeloid dendritic cells. Motolimod also increases IFN-γ production in natural killer (NK) cells and increases cytotoxicity in K562 NK cell-sensitive leukemia cells when used at concentrations of 167 and 500 nM for 48 hours. It increases plasma levels of a group of human cytokines, including IL-6, IL-12p70, TNF-α, MCP-1, and MIP-1β, in *NOD-scid IL2ry<sup>null</sup>* (NSG) mice reconstituted with human immune system (NSG-HIS) when administered at doses of 1.5 and 15 mg/m<sup>2</sup>.<sup>2</sup> Motolimod, when used in combination with pegylated liposomal doxorubicin (PLD), reduces tumor growth and increases tumor infiltration of monocytes and T cells in an ovarian cancer NSG-HIS mouse model.

### References

1. Lu, H., Dietsch, G.N., Matthews, M.A., *et al.* VTX-2337 is a novel TLR8 agonist that activates NK cells and augments ADCC. *Clin Cancer Res.* **18(2)**, 499-509 (2012).
2. Monk, B.J., Facciabene, A., Brady, W.E., *et al.* Integrative development of a TLR8 agonist for ovarian cancer chemoimmunotherapy. *Clin Cancer Res.* **23(8)**, 1955-1966 (2017).

#### 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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