



# SZABO SCANDIC

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## Produktinformation



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Laborgeräte & Service

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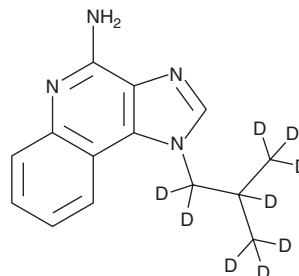
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# PRODUCT INFORMATION



## Imiquimod-d<sub>9</sub> Item No. 26424

**Formal Name:** 1-(2-(methyl-d<sub>3</sub>)propyl-1,1,2,3,3,3-d<sub>6</sub>)-1H-imidazo[4,5-c]quinolin-4-amine  
**MF:** C<sub>14</sub>H<sub>7</sub>D<sub>9</sub>N<sub>4</sub>  
**FW:** 249.4  
**Chemical Purity:** ≥98% (Imiquimod)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>9</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Imiquimod-d<sub>9</sub> is intended for use as an internal standard for the quantification of imiquimod (Item No. 14956) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Imiquimod-d<sub>9</sub> is supplied as a solid. A stock solution may be made by dissolving the imiquimod-d<sub>9</sub> in the solvent of choice. Imiquimod-d<sub>9</sub> is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of imiquimod-d<sub>9</sub> in these solvents is approximately 1 mg/ml.

### Description

Imiquimod is an imidazoquinoline agonist of toll-like receptor 7 (TLR7; EC<sub>50</sub> = 2.12 μM).<sup>1</sup> It increases TNF-α and IL-12 p40 production in IFN-γ-treated murine peritoneal macrophages in a concentration- and MyD88-dependent manner.<sup>2</sup> Topical application of imiquimod (30 μl of 5% cream) increases TNF and IFN levels at the application site in hairless mice.<sup>3</sup> Imiquimod dose-dependently increases serum levels of IFN-α in mice when administered by gavage.<sup>4</sup> It reduces tumor growth in an MC-26 model of murine colon cancer when administered at a dose of 30 mg/kg every three days. Imiquimod (5 mg/kg, intravaginally, twice daily) reduces vaginal viral titer and lesion formation in a guinea pig model of genital HSV-2 infection.<sup>5</sup> Formulations containing imiquimod have been used in the treatment of actinic keratosis, superficial basal cell carcinoma, and external genital warts.

### References

1. Shukla, N.M., Mallardi, S.S., Mutz, C.A., et al. *J. Med. Chem.* **53**(11), 4450-4465 (2010).
2. Hemmi, H., Kaisho, T., Takeuchi, O., et al. *Nat. Immunol.* **3**(2), 196-200 (2002).
3. Imbertson, L.M., Beaurline, J.M., Couture, A.M., et al. *J. Invest. Dermatol.* **110**(5), 734-739 (1998).
4. Sidky, Y.A., Borden, E.C., Weeks, C.E., et al. *Cancer Res.* **52**(13), 3528-3533 (1992).
5. Harrison, C.J., Jensi, L.J., Voychekovski, T., et al. *Antiviral Res.* **10**(4-5), 209-223 (1988).

#### 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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