

## Certificate of Analysis

**Product Name:** Imiquimod

**Catalog No.:** 3700

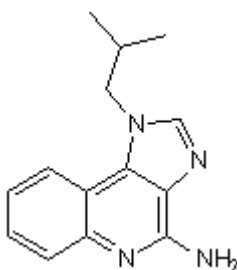
**Batch No.:** 1

CAS Number: 99011-02-6

IUPAC Name: 1-(2-Methylpropyl)-1*H*-imidazo[4,5-*c*]quinolin-4-amine

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>14</sub>H<sub>16</sub>N<sub>4</sub>  
**Batch Molecular Weight:** 240.3  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 5 mM with gentle warming  
**Storage:** Store at +4°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**HPLC:** Shows 99.1% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	69.97	6.71	23.32
Found	69.9	6.88	23.22

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Description:**

Immunomodulator that displays antiviral and antitumor activity. Acts as a Toll-like receptor 7 (TLR7) agonist; stimulates proinflammatory cytokine production and activates NF- $\kappa$ B.

**Physical and Chemical Properties:**

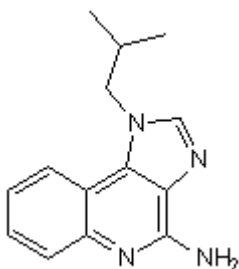
Batch Molecular Formula: C<sub>14</sub>H<sub>16</sub>N<sub>4</sub>

Batch Molecular Weight: 240.3

Physical Appearance: White solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**References:**

**Syed et al** (2001) A review of the applications of imiquimod: a novel immune response modifier. *Exp.Opin.Pharmacother.* **2** 877.

**Schon and Schon** (2007) The antitumoral mode of action of imiquimod and other imidazoquinolines. *Curr.Med.Chem.* **14** 681. PMID: 17346155.

**Averett et al** (2007) The pharmacology of endosomal TLR agonists in viral disease. *Biochem.Soc.Trans.* **35** 1468. PMID: 18031247.

**Storage:** Store at +4°C

**Solubility & Usage Info:**

DMSO to 5 mM with gentle warming

NOTE: This compound is soluble in DMSO to 10mM, but to achieve this concentration, the solution must be heated at 60°C for 15minutes.

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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