

# Certificate of Analysis

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**Product Name:** XAV 939

**Catalog No.:** 3748

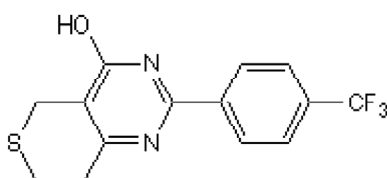
**Batch No.:** 8

CAS Number: 284028-89-3

IUPAC Name: 3,5,7,8-Tetrahydro-2-[4-(trifluoromethyl)phenyl]-4*H*-thiopyrano[4,3-*d*]pyrimidin-4-one

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>14</sub>H<sub>11</sub>F<sub>3</sub>N<sub>2</sub>OS  
**Batch Molecular Weight:** 312.31  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 20 mM  
**Storage:** Store at RT  
**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 100% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	53.84	3.55	8.97
Found	53.56	3.52	9.01

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

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**Description:**

XAV 939 is a potent tankyrase (TNKS) inhibitor (IC<sub>50</sub> values are 4 and 11 nM for TNKS2 and TNKS1 respectively). Antagonizes Wnt signaling via stimulation of β-catenin degradation and stabilization of axin. XAV 939 inhibits proliferation of the β-catenin-dependent colon carcinoma cell line DLD-1. Promotes cardiomyocyte differentiation in mesoderm progenitor cells. Also used in neuronal differentiation protocols. XAV 939 synthesized to cGMP guidelines also available. For more information about how XAV 939 may be used, see our protocol: Accelerated Induction of Cortical Neurons from hiPSCs Please see product specific page on [www.tocris.com](http://www.tocris.com) for full description.

**Physical and Chemical Properties:**

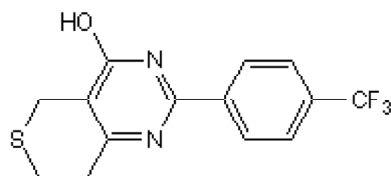
Batch Molecular Formula: C<sub>14</sub>H<sub>11</sub>F<sub>3</sub>N<sub>2</sub>OS

Batch Molecular Weight: 312.31

Physical Appearance: White solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**Storage:** Store at RT

**Solubility & Usage Info:**

DMSO to 20 mM

**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. \*Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

**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.

**References:**

**Wang *et al*** (2010) Cardiac induction of embryonic stem cells by a small molecule inhibitor of Wnt/β-catenin signaling. *ACS Chem. Biol.* **6** 192. PMID: 21077691.

**Adler** (2009) Inhibiting wnt signaling. *Sci.Signal.* **91**.

**Huang *et al*** (2009) Tankyrase inhibition stabilizes axin and antagonizes wnt signalling. *Nature* **461** 614. PMID: 19759537.

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