

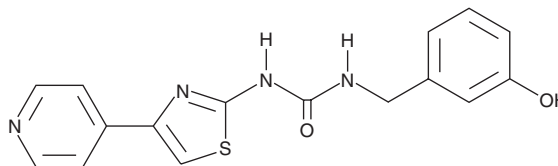
# PRODUCT INFORMATION



**RKI-1447**

Item No. 16278

**CAS Registry No.:** 1342278-01-6  
**Formal Name:** N-[(3-hydroxyphenyl)methyl]-N'-[4-(4-pyridinyl)-2-thiazolyl]-urea  
**MF:** C<sub>16</sub>H<sub>14</sub>N<sub>4</sub>O<sub>2</sub>S  
**FW:** 326.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 228, 265 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

RKI-1447 is supplied as a crystalline solid. A stock solution may be made by dissolving the RKI-1447 in the solvent of choice, which should be purged with an inert gas. RKI-1447 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of RKI-1447 in these solvents is approximately 30 mg/ml.

RKI-1447 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, RKI-1447 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. RKI-1447 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

## Description

RKI-1447 is an inhibitor of the Rho-associated kinases ROCK1 and 2 (IC<sub>50</sub>s = 14.5 and 6.2 nM, respectively) that functions by binding to the ATP binding site of the kinase.<sup>1</sup> In cancer cells, RKI-1447 at a concentration of 100 nM has been found to suppress the activation of ROCK substrates myosin light chain (MLC)-2 and the MLC phosphatase PP1 regulatory subunit MYPT1 without effect on the phosphorylation of Akt, MEK, or S6 kinase.<sup>1</sup> Furthermore, it can prevent ROCK-mediated migration, invasion, and anchorage-independent growth of MDA-MB-231 breast cancer cells (IC<sub>50</sub> = 709 nM).<sup>1</sup>

## Reference

1. Patel, R.A., Forinash, K.D., Pireddu, R., *et al.* RKI-1447 is a potent inhibitor of the Rho-associated ROCK kinases with anti-invasive and anti-tumor activities in breast cancer. *Cancer Res.* **72(19)**, 5025-5034 (2012).

### 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.

### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/28/2022

## CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM