

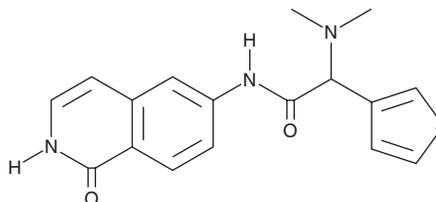
# PRODUCT INFORMATION



## Verosudil

Item No. 42234

**CAS Registry No.:** 1414854-42-4  
**Formal Name:** N-(1,2-dihydro-1-oxo-6-isoquinoliny)- $\alpha$ -(dimethylamino)-3-thiopheneacetamide  
**Synonym:** AR-12286  
**MF:** C<sub>17</sub>H<sub>17</sub>N<sub>3</sub>O<sub>2</sub>S  
**FW:** 327.4  
**Purity:**  $\geq$ 98%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years



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

### Laboratory Procedures

Verosudil is supplied as a solid. A stock solution may be made by dissolving the verosudil in the solvent of choice, which should be purged with an inert gas. Verosudil is soluble ( $\geq$ 10 mg/ml) in DMSO and slightly soluble (0.1-1 mg/ml) in ethanol.

### Description

Verosudil is an inhibitor of Rho-associated kinase 1 (ROCK1) and ROCK2 ( $K_i = 2$  nM for both).<sup>1</sup> It is selective for ROCK1 and ROCK2 over PKA, PKC $\theta$ , Cdc42-binding kinase  $\alpha$  (MRCK $\alpha$ ), and calcium/calmodulin-dependent protein kinase IV (CaMKIV;  $K_i$ s = 69, 9,332, 28, and 5,855 nM, respectively). Verosudil (1  $\mu$ M) decreases focal adhesion points on, and actin fiber length in, primary porcine trabecular meshwork (PTM) cells. It inhibits TGF- $\beta$ -induced increases in  $\alpha$ -smooth muscle actin ( $\alpha$ -SMA) levels in primary human conjunctival fibroblasts when used at concentrations of 250 or 500 nM.<sup>2</sup> Verosudil inhibits TGF- $\beta$ -induced migration in a wound healing assay using primary human conjunctival fibroblasts. It reduces intraocular pressure (IOP) in rabbits and Formosan rock monkeys when ocularly administered at a concentration of 0.5%.<sup>1</sup> Ocular administration of verosudil (0.5%) decreases IOP and subconjunctival collagen levels in a rabbit model of trabeculectomy.<sup>2</sup>

### References

1. Lin, C.W., Sherman, B., Moore, L.A., *et al.* Discovery and preclinical development of netarsudil, a novel ocular hypotensive agent for the treatment of glaucoma. *J. Ocul. Pharmacol. Ther.* **34**(1-2), 40-51 (2018).
2. Cheng, W.S., Chen, C.L., Chen, J.T., *et al.* AR12286 alleviates TGF- $\beta$ -related myofibroblast transdifferentiation and reduces fibrosis after glaucoma filtration surgery. *Molecules* **25**(19), 4422 (2020).

#### 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

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#### 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