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Zuschläge

- Mindermengenzuschlag
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- Expressversand

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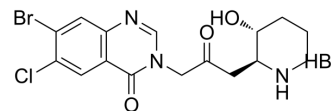
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Halofuginone hydrobromide (Standard)

Cat. No.:	HY-N1584AR
CAS No.:	64924-67-0
Molecular Formula:	C ₁₆ H ₁₈ Br ₂ ClN ₃ O ₃
Molecular Weight:	495.59
Target:	DNA/RNA Synthesis; TGF-beta/Smad; Sodium Channel; Calcium Channel; Parasite
Pathway:	Cell Cycle/DNA Damage; Stem Cell/Wnt; TGF-beta/Smad; Membrane Transporter/Ion Channel; Neuronal Signaling; Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Halofuginone (hydrobromide) (Standard) is the analytical standard of Halofuginone (hydrobromide). This product is intended for research and analytical applications. Halofuginone (RU-19110) hydrobromid, a Febrifugine derivative, is a competitive prolyl-tRNA synthetase inhibitor with a K_i of 18.3 nM^{[1][2]}. Halofuginone hydrobromid is a specific inhibitor of type-I collagen synthesis and attenuates osteoarthritis (OA) by inhibition of TGF- β activity^{[3][4]}. Halofuginone hydrobromid is also a potent pulmonary vasodilator by activating Kv channels and blocking voltage-gated, receptor-operated and store-operated Ca²⁺ channels. Halofuginone hydrobromid has anti-malaria, anti-inflammatory, anti-cancer, anti-fibrosis effects^[5].

IC₅₀ & Target

Ki: 18.3±0.5 nM (prolyl-tRNA synthetase)^[2]

REFERENCES

- [1]. Tsuchida K, et al. Halofuginone enhances the chemo-sensitivity of cancer cells by suppressing NRF2 accumulation. *Free Radic Biol Med*. 2017 Feb;103:236-247.
- [2]. Keller TL, et al. Halofuginone and other Febrifugine derivatives inhibit prolyl-tRNA synthetase. *Nat Chem Biol*. 2012 Feb 12;8(3):311-7.
- [3]. Cui Z, et al. Halofuginone attenuates osteoarthritis by inhibition of TGF- β activity and H-type vessel formation in subchondral bone. *Ann Rheum Dis*. 2016 Sep;75(9):1714-21.
- [4]. Tracy L McGaha, et al. Halofuginone, an inhibitor of type-I collagen synthesis and skin sclerosis, blocks transforming-growth-factor-beta-mediated Smad3 activation in fibroblasts. *J Invest Dermatol*. 2002 Mar;118(3):461-70.
- [5]. Pritesh P Jain, et al. Halofuginone, a Promising Drug for Treatment of Pulmonary Hypertension. *Br J Pharmacol*. 2021 Mar 10.

Caution: Product has not been fully validated for medical applications. For research use only.

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