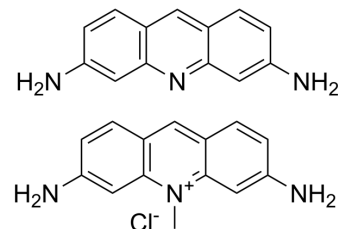


Acriflavine

Cat. No.:	HY-100575
CAS No.:	8048-52-0
Molecular Formula:	C ₁₄ H ₁₄ ClN ₃
Molecular Weight:	259.73
Target:	HIF/HIF Prolyl-Hydroxylase
Pathway:	Metabolic Enzyme/Protease
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro	H ₂ O : ≥ 25 mg/mL (96.25 mM) * "≥" means soluble, but saturation unknown.				
	Preparing Stock Solutions	<div>Solvent Concentration</div> Mass	1 mg	5 mg	10 mg
		1 mM	3.8502 mL	19.2508 mL	38.5015 mL
		5 mM	0.7700 mL	3.8502 mL	7.7003 mL
		10 mM	0.3850 mL	1.9251 mL	3.8502 mL
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: PBS Solubility: 2 mg/mL (7.70 mM); Clear solution; Need ultrasonic and warming and heat to 60°C				

BIOLOGICAL ACTIVITY

Description	Acriflavine is a fluorescent dye for labeling high molecular weight RNA. It is also a topical antiseptic.
In Vitro	Acriflavine is identified as a potent inhibitor of the MCT4 that can inhibit the binding between Basigin and MCT4. Acriflavine significantly inhibits growth and self-renewal potential of several glioblastoma neurosphere lines ^[1] . The HIF-1 inhibitor acriflavine decreases survival and growth of CML cells. It targets stem cell potential of CML cells ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Acriflavine treatment inhibits intratumoral expression of VEGF and tumor vascularization ^[1] . In a murine CML model, acriflavine decreases leukemia development and reduces LSC maintenance ^[2] . Acriflavine retards tumor growth in a murine model of breast cancer. The combination of sunitinib with acriflavine significantly decreases vascular endothelial growth factor and TGF-β expression and reduces tumor vasculature followed by increased intratumor necrosis and apoptosis ^[3] .

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration ^[2]

Mice: CML mice are treated daily with acriflavine (8 mg/kg) or PBS via intraperitoneal injection, for 10 days starting from day 7 after bone marrow transplantation^[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- EBioMedicine. 2019 Nov;49:291-304.
- EBioMedicine. 2018 May;31:202-216.
- J Clin Endocrinol Metab. 2022 Oct 3;dgac548.
- J Photochem Photobiol B. 2022 Sep;234:112537.

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REFERENCES

- [1]. Voss DM, et al. Disruption of the monocarboxylate transporter-4-basigin interaction inhibits the hypoxic response, proliferation, and tumor progression. Sci Rep. 2017 Jun 27;7(1):4292.
- [2]. Cheloni G, et al. Targeting chronic myeloid leukemia stem cells with the hypoxia-inducible factor inhibitor acriflavine. Blood. 2017 Jun 2. pii: blood-2016-10-745588.
- [3]. Yin T, et al. HIF-1 Dimerization Inhibitor Acriflavine Enhances Antitumor Activity of Sunitinib in Breast Cancer Model. Oncol Res. 2014;22(3):139-45.
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Caution: Product has not been fully validated for medical applications. For research use only.

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