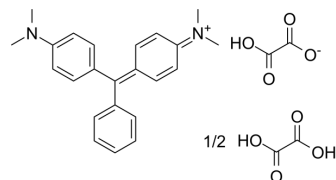


## Malachite green hemioxalate

<b>Cat. No.:</b>	HY-D0162
<b>CAS No.:</b>	2437-29-8
<b>Molecular Formula:</b>	$C_{23}H_{25}N_2 \cdot 1/2 C_2H_2O_4 \cdot C_2HO_4$
<b>Molecular Weight:</b>	463.5
<b>Target:</b>	IKK; NF- $\kappa$ B; Apoptosis
<b>Pathway:</b>	NF- $\kappa$ B; Apoptosis
<b>Storage:</b>	4°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : $\geq 10$ mg/mL (21.57 mM) * " $\geq$ " means soluble, but saturation unknown.				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	2.1575 mL	10.7875 mL	21.5750 mL
		5 mM	0.4315 mL	2.1575 mL	4.3150 mL
10 mM		0.2157 mL	1.0787 mL	2.1575 mL	
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: $\geq 2.5$ mg/mL (5.39 mM); Clear solution  2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE- $\beta$ -CD in saline) Solubility: $\geq 2.5$ mg/mL (5.39 mM); Clear solution				

### BIOLOGICAL ACTIVITY

<b>Description</b>	Malachite green hemioxalate is a triphenylmethane dye which can be used to detect the release of phosphate in enzymatic reactions. Malachite green hemioxalate is also a potent and selective inhibitor of IKK $\beta$ , and inhibits its downstream targets such as I $\kappa$ B $\alpha$ , p65 and IRF3. Malachite green hemioxalate exhibits antitumor activity in vitro and in vivo <sup>[1][2][3]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	IKK $\beta$ <sup>[3]</sup>

### CUSTOMER VALIDATION

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- Mol Ther Oncolytics. 25 August 2022.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

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- [1]. Kozuka S, et, al. Permeability of dormant spores of Bacillus subtilis to malachite green and crystal violet. J Gen Microbiol. 1991 Mar; 137(3): 607-13.
- [2]. Takahashi S, et, al. Reversible off-on fluorescence probe for hypoxia and imaging of hypoxia-normoxia cycles in live cells. J Am Chem Soc. 2012 Dec 5; 134(48): 19588-91.
- [3]. Liu T, et, al. Identification of an IKBKE inhibitor with antitumor activity in cancer cells overexpressing IKBKE. Cytokine. 2019 Apr; 116: 78-87.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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