

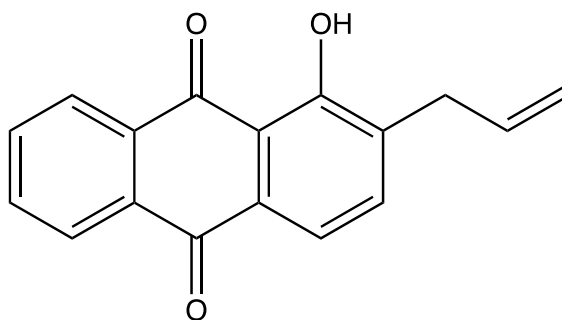
**Catalog #10-4603**

**R162**

CAS# 64302-87-0

Purpurin analog; 1-Hydroxy-2-(2-propen-1-yl)-9,10-anthracenedione

Lot # FBA8005



R162 is a selective inhibitor of glutamate dehydrogenase 1 (GDH1), a commonly upregulated enzyme in human cancers ( $K_i = 28.6 \mu\text{M}$ ). It does not inhibit the activity of other NADPH enzymes such as 6-phosphogluconate dehydrogenase and fumarate hydratase. R162 treatment leads to decreased fumarate levels, lower glutathione peroxidase activity, increased ROS levels and reduced cell proliferation in H1299 and MDA-MB231 cells. R162 sensitizes LKB-1 deficient tumor cells to anoikis induction. R162 treatment (at 20 mg/kg/day) significantly attenuates metastatic potential in a xenograft mouse model.<sup>2</sup> GDH1 is a promising antimetastasis target and R162 is a useful tool for proof of principal studies.

- 1) Jin *et al.* (2015), *Glutamate Dehydrogenase 1 Signals through Antioxidant Glutathione Peroxidase 1 to Regulate Redox Homeostasis and Tumor Growth*; *Cancer Cell* **27** 257
- 2) Jin *et al.* (2018) *The PLAG1-GDH1 Axis Promotes Anokis Resistance and Tumor Metastasis through CamKK2-AMPK Signaling in LKB1-Deficient Lung Cancer*; *Mol. Cell*, **69** 1

**PHYSICAL DATA**

Molecular Weight:	264.28
Molecular Formula:	$\text{C}_{17}\text{H}_{12}\text{O}_3$
Purity:	>98% (TLC)
	NMR: (Conforms)
Solubility:	DMSO (10 mg/mL) and ethanol (5 mg/mL)
Physical Description:	Yellow/orange solid
Storage and Stability:	Store as supplied at $-20^\circ\text{C}$ for up to 1 year from the date of purchase. Solutions in DMSO or ethanol may be stored at $-20^\circ\text{C}$ for up to 3 months.

**Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.**

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