

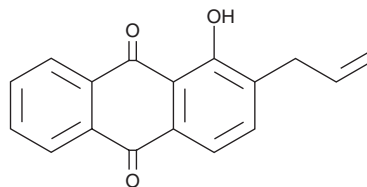
# PRODUCT INFORMATION



## R162

Item No. 30922

**CAS Registry No.:** 64302-87-0  
**Formal Name:** 1-hydroxy-2-(2-propen-1-yl)-9,10-anthracenedione  
**MF:** C<sub>17</sub>H<sub>12</sub>O<sub>3</sub>  
**FW:** 264.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 223, 253 nm  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

R162 is supplied as a solid. A stock solution may be made by dissolving the R162 in the solvent of choice, which should be purged with an inert gas. R162 is soluble in the organic solvent dimethyl formamide at a concentration of approximately 1 mg/ml. R162 is slightly soluble in ethanol and DMSO.

### Description

R162 is an inhibitor of glutamate dehydrogenase 1 (GDH1; IC<sub>50</sub> = 23 μM).<sup>1</sup> It decreases intracellular fumarate levels and increases the production of mitochondrial reactive oxygen species (ROS) in human H1299 lung and MDA-MB-231 breast cancer cells. R162 (10-40 μM) inhibits proliferation in a panel of human cancer cell lines, including lung, breast, and leukemia cells, but not normal human HaCaT keratinocytes, MRC-5 lung fibroblasts, or foreskin fibroblasts. It reduces tumor growth and intratumoral GDH1 activity in an H1299 mouse xenograft model when administered at a dose of 20 mg/kg. R162 also reduces liver metastasis in a liver kinase B1-deficient lung cancer patient-derived xenograft (PDX) mouse model when administered at the same dose.<sup>2</sup>

### References

1. Jin, L., Li, D., Alesi, G.N., *et al.* Glutamate dehydrogenase 1 signals through antioxidant glutathione peroxidase 1 to regulate redox homeostasis and tumor growth. *Cancer Cell* **27**(2), 257-270 (2015).
2. Jin, L., Chun, J., Pan, C., *et al.* The PLAG1-GDH1 axis promotes anoikis resistance and tumor metastasis through CamKK2-AMPK signaling in LKB1-deficient lung cancer. *Mol. Cell* **69**(1), 87-99 (2018).

#### 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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