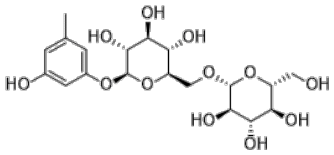
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Data Sheet

Global Supplier of Chemical Probes, Inhibitors & Agonists.

Product Name	:	Orcinol gentiobioside
Cat. No.	:	PC-28545
CAS No.	:	164991-86-0
Molecular Formula	:	$C_{19}H_{28}O_{12}$
Molecular Weight	:	448.42
Target	:	Fungal
Solubility	:	10 mM in DMSO



Biological Activity

Orcinol gentiobioside (OGB) is a specific small molecule inhibitor of Catalase-peroxidase 1 (KatG1), targets KatG1 (MST Kd=0.62 uM) and inhibits its nuclear translocation, effectively suppressing the ROS scavenging capacity, inhibiting M. oryzae invasion in rice.
Orcinol gentiobioside (OGB) binds within the catalytic pocket of KatG1.
Orcinol gentiobioside (OGB) treatment (10 μM) successfully disrupted the KatG1-Ssb1 interaction in wild-type strains, thereby reducing KatG1 nuclear accumulation and impairing ROS scavenging capacity.
Orcinol gentiobioside (OGB) directly inhibits KatG1 catalase activity and decreases the expression of oxidoreduction pathway-related genes.
Orcinol gentiobioside (OGB) does not inhibit the in vitro catalase activity of its recombinant paralog KatG2 purified from Escherichia coli.
Orcinol gentiobioside (OGB) inhibits virulence of the rice blast fungus.
KatG1 acts as a ROS-responsive regulatory enzyme and is essential for M. oryzae to adapt to oxidative stress.
Orcinol gentiobioside (OGB) also inhibits RANKL-induced osteoclastogenesis by promoting apoptosis and suppressing autophagy via the JNK1 signaling.

References

Ren Z, et al. Nat Commun. 2026 Sep 14;17(1):10774.

Lian C, et al. J Ethnopharmacol. 2024 Jun 28;328:118060.

Caution: Product has not been fully validated for medical applications. Lab Use Only!

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