

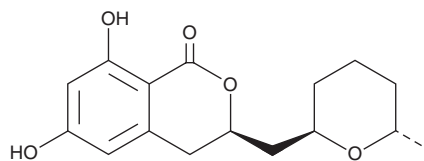
# PRODUCT INFORMATION



## Cladosporin

Item No. 40864

CAS Registry No.: 35818-31-6  
Formal Name: (3R)-3,4-dihydro-6,8-dihydroxy-3-  
[[[(2R,6S)-tetrahydro-6-methyl-2H-pyran-2-  
yl)methyl]-1H-2-benzopyran-1-one  
Synonym: Asperentin  
MF: C<sub>16</sub>H<sub>20</sub>O<sub>5</sub>  
FW: 292.3  
Purity: ≥70%  
Supplied as: A solid  
Storage: -20°C  
Stability: ≥4 years  
Item Origin: Bacterium/*Penicillium atrovenerum*



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

### Laboratory Procedures

Cladosporin is supplied as a solid. A stock solution may be made by dissolving the cladosporin in the solvent of choice, which should be purged with an inert gas. Cladosporin is soluble in ethanol, methanol, dichloromethane, and DMSO.

### Description

Cladosporin is a microbial metabolite originally isolated from *C. cladosporioides* that has diverse biological activities.<sup>1-3</sup> It selectively inhibits *P. falciparum* lysyl-tRNA ligase over human lysyl-tRNA ligase (IC<sub>50</sub>s = 0.061 and >20 μM, respectively).<sup>1</sup> Cladosporin inhibits the replication of eight strains of *Plasmodium* with IC<sub>50</sub> values ranging from 45.4 to 89.6 nM and decreases *P. falciparum* protein synthesis by 75% at 610 nM. It is active against the bacteria *M. flavus* (MIC = 40 μg/ml) and inhibits spore germination by the plant pathogenic fungi *P. viridicatum* when used at a concentration of 5 μg/ml.<sup>2</sup> Cladosporin (30 μM) inhibits the growth of the plant pathogenic fungi *C. acutatum*, *C. fragariae*, *C. gloeosporioides*, and *P. viticola*.<sup>3</sup>

### References

1. Hoepfner, D., McNamara, C.W., Lim, C.S., *et al.* Selective and specific inhibition of the *Plasmodium falciparum* lysyl-tRNA synthetase by the fungal secondary metabolite cladosporin. *Cell Host Microbe* **11**(6), 654-663 (2021).
2. Scott, P.M., Van Walbeek, W., and MacLean, W.M. Cladosporin, a new antifungal metabolite from *Cladosporium cladosporioides*. *J. Antibiot. (Tokyo)* **24**(11), 747-755 (1971).
3. Wang, X., Radwan, M.M., Taráwneh, A.H., *et al.* Antifungal activity against plant pathogens of metabolites from the endophytic fungus *Cladosporium cladosporioides*. *J. Agric. Food Chem.* **61**(19), 4551-4555 (2013).

#### 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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