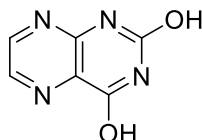


## Lumazine

Code No.: **BIA-L2672**

Pack sizes: **25 mg, 100 mg**



Synonyms : 2,4(3H,8H)-Pteridinedione, 2,4-Dihydroxypteridine, 2,4-Pteridinediol, NSC 225113, NSC 41801, Pteridine-2,4-dione

## Specifications

CAS #	: 487-21-8
Molecular Formula	: C <sub>6</sub> H <sub>4</sub> N <sub>4</sub> O <sub>2</sub>
Molecular Weight	: 164.12
Source	: Synthetic
Appearance	: White solid
Purity	: >95% by HPLC
Long Term Storage	: -20°C
Solubility	: Soluble in methanol or DMSO

## Application Notes

Lumazine is a fluorescent pteridine occurring naturally in plants (*Brassica juncea*), insects (*Formica polyctena*) and the sea sponge *Corallistes fulvodesmus*, recently reviewed by Brimble and co-workers, University of Auckland, New Zealand. Lumazine is a photosensitizing agent, generating a singlet oxygen on UV irradiation. Lumazine is bactericidal to *Methanobacterium thermoautotrophisum* strain Marburg and is a selective inhibitor of methanogenesis used to improve the hydrogen production in microbial electrolysis cells.

## References

1. Naturally occurring lumazines. Daniels B.J. et al. *J Nat Prod.* 2019, 82, 2054.
2. Tautomerism and fluorescence of lumazine. Klein R. et al. *Photochem Photobiol.* 1987, 45, 55.
3. The photosensitizing activity of lumazine using 2'-deoxyguanosine 5'-monophosphate and HeLa cells as targets. Denofrio P.M. *Photochem Photobiol. Sci* 2009, 8, 1539.
4. The pterin lumazine inhibits growth of methanogens and methane formation. Nagar-Anthal K.R. et al. *Arch Microbiol.* 1996, 166, 136.