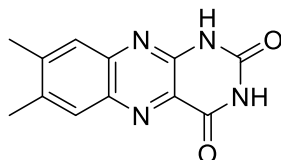


Lumichrome

Code No.: **BIA-L2671**

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



Synonyms : 7,8-Dimethylisoalloxazine, NSC 96911, Riboflavin lumichrome

Specifications

CAS #	: 1086-80-2
Molecular Formula	: C₁₂H₁₀N₄O₂
Molecular Weight	: 242.23
Source	: <i>Sinorhizobium meliloti</i>
Appearance	: Yellow solid
Purity	: >95% by HPLC
Long Term Storage	: -20°C
Solubility	: Soluble in methanol or DMSO

Application Notes

Lumichrome is a fluorescent, biologically active flavin produced by *Micomonospora* sp. and some other actinomycetes, fungi and plants, also formed by photolysis of riboflavin in acid or neutral solution. Lumichrome is a signalling molecule that enhances plant growth through a combination of enhanced cell division and cell enlargement and possible enhancement of photosynthesis. Lumichrome activates the LasR bacterial quorum sensing receptor and has anti-apoptotic activity via p53. Lumichrome inhibits osteoclastogenesis and bone resorption.

References

1. Ein neues Bestrahlungsprodukt des Lactoflavins: Lumichrom. Karrer P. et al. *Helv Chim Acta* 1934, 17, 1010.
2. Identification of lumichrome as a *Sinorhizobium* enhancer of alfalfa root respiration and shoot growth. Phillips D.A. et al. *Proc Nat Acad Sci.* 1999, 96, 12275.
3. The vitamin riboflavin and its derivative lumichrome activate the LasR bacterial quorum sensing receptor. Rajamani S. et al. *Molecular Plant-Microbe Interactions* 2008, 21, 1184.
4. Lumichrome inhibits human lung cancer cell Growth and induces apoptosis via a p53-dependent mechanism. Chantarawong W. *Nutr Cancer* 2019, 71, 1390.
5. Lumichrome inhibits osteoclastogenesis and bone resorption through suppressing RANKL-induced NFAT activation and calcium signalling. Liu C. et al. *J Cellular Physiol.* 2018, 233, 8971.