Biotium
Supplier of fluorescent and related biochemical reagents for life science research and drug discovery
Glowing Products for Science™
46117 Landing Parkway, Fremont, CA 94538 U.S.A.
Tel: 1-510-265-1027; Fax: 1-510-265-1352
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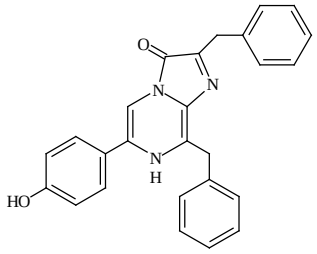
PRODUCT AND SAFETY DATA SHEET

PRODUCT NAME: **Coelenterazine *h*** (also known as **2-(4-Dehydroxy) coelenterazine**)

CATALOG #: **10111/10111-1/10111-2**

MOLECULAR INFORMATION: $C_{26}H_{21}N_3O_2$
Mwt: 407.5



PROPERTIES:

Color & Form	Yellow orange solid
Purity	≥ 98% by HPLC
Solubility	Low solubility in water. Soluble in methanol and ethanol. **AVOID DMSO**.
Absorption	437 nm
Emission Maxima	466 nm
Extinction Coefficient	9500 (MeOH)

STORAGE AND HANDLING: Solution is susceptible to oxidation by air. For best results, keep solution from light and store at < -70°C under nitrogen or argon. Keep solid at -20 °C or -70 °C and protect from light under nitrogen or argon for long-term storage. Keep calcium free when stored in solution (avoid using glass container).

APPLICATION: Coelenterazine *h* is a synthetic derivative of coelenterazine, and can be used to resemble the *Aequorin* complex both *in vivo* and *in vitro*. Coelenterazine *h* generates luminescence intensity almost 20 times higher than native coelenterzine. It is thus more sensitive to Ca^{2+}, and is valuable in measuring small changes in Ca^{2+} concentrations.

Use methanol or ethanol to prepare the stock solution. Do not use DMSO (dimethylsulfoxide), as coelenterazine *h* may be unstable in this solvent.

Biotium also offers a number of other coelenterazine analogs. The luminescent properties of these analogs are listed in the table below.

Ref: 1) *Biochem. J.* **261**, 913(1989); 2) *Cell Calcium* **12**, 635(1991). 3) *J.Cell Biol*. **121**, 83(1993); 4) *Mol Imaging,* **3** (1), 43(2004 Jan)

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Luminescent Properties of Coelenterazine Products*

Cat. #	Coelentera-zine Product	Emission Maximum (nm)	Relative Luminescence capacity	Relative Intensity	Half-rise Time (s)
10110	native	466	1.00	1.00	0.4-0.8
10112	*cp*	442	0.95	15	0.15-0.3
10114	*f*	473	0.80	18	0.4-0.8
10117	*fcp*	452	0.57	135	0.4-0.8
10111	*h*	466	0.82	10	0.4-0.8
10113	*hcp*	444	0.67	190	0.15-0.3
10121	*i*	476	0.70	0.03	8
10116	*ip*	441	0.54	47	1
10115	*n*	467	0.26	0.01	5
10122	*methyl*	Used as a strong nontoxic antioxidant for free radical and apoptosis research.			

*All data from *Biochem. J.* **261**, 913(1989)

TOXICITY: Unknown

FIRST AID:	Potentially harmful. Avoid prolonged or repeated exposure. Avoid getting in eyes, on skin, or on clothing. Wash thoroughly after handling. If eye or skin contact occurs, wash affected areas with plenty of water for 15 minutes and seek medical advice. In case of inhaling or swallowing, move individual to fresh air and seek medical advice immediately.