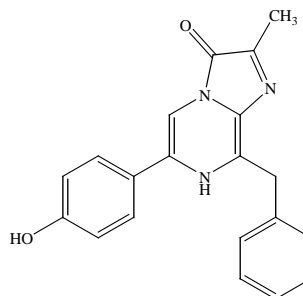


## PRODUCT AND SAFETY DATA SHEET

**PRODUCT NAME:** Coelenterazine, 2-methyl**CATALOG #:** 10122/10122-1**MOLECULAR INFORMATION:** C<sub>20</sub>H<sub>17</sub>N<sub>3</sub>O<sub>2</sub>  
Mwt: 331.37**PROPERTIES:**

**Color & Form** Yellow solid  
**Purity** ≥ 96% by HPLC  
**Solubility** Soluble in methanol and ethanol. **Avoid** DMSO.

**STORAGE AND HANDLING:**

Store desiccated at -20 °C. Protect from light, especially when in solution. Use under nitrogen or argon and stay oxygen free for long term storage whenever possible. Keep calcium free when stored in solution.

**APPLICATION:**

Methyl coelenterazine has been reported to be a superior antioxidant for cells against reactive oxygen species (ROS) such as singlet oxygen and superoxide anion.<sup>1</sup> The coelenterazine derivative is membrane-permeant, nontoxic and highly reactive toward ROS. As oxidative stress is believed to be a mediator of apoptosis,<sup>2</sup> methyl coelenterazine should be another important tool for apoptosis study.

Please also see our native coelenterazine (10110) and other coelenterazine derivatives. Coelenterazine products are widely used to detect superoxide and peroxynitrite via chemiluminescence.<sup>3,4</sup>

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

Ref.: 1) *Biochem. Pharmacol.* **60**, 471(2000); 2) *Immunol. Today* **15**, 7(1994); 3) *Anal. Biochem.* **206**, 273(1992); 4) *Circ. Res.* **84**, 1203(1999); 5) *Mol Imaging*, **3** (1), 43(2004 Jan)

**Luminescent Properties of Coelenterazine Products\***

Cat. #	Coelenterazine 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	<i>cp</i>	442	0.95	15	0.15-0.3
10114	<i>f</i>	473	0.80	18	0.4-0.8
10117	<i>fcp</i>	452	0.57	135	0.4-0.8
10111	<i>h</i>	466	0.82	10	0.4-0.8
10113	<i>hcp</i>	444	0.67	190	0.15-0.3
10121	<i>i</i>	476	0.70	0.03	8
10116	<i>ip</i>	441	0.54	47	1
10115	<i>n</i>	467	0.26	0.01	5
10122	<i>methyl</i>	Used as a strong nontoxic antioxidant for free radical and apoptosis research.			

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

### Luminescent Properties of Coelenterazine Analogs with *Renilla* Luciferase\*

Cat. #	Coelenterazine Product	Emission Maximum (nm)	Total Light (%)	Initial Intensity (%)
10110	native	475	100	100
10112	<i>cp</i>	470	23	16
10124	<i>e</i>	418 and 475	137	750
10114	<i>f</i>	473	28	58
10111	<i>h</i>	475	41	57
10115	<i>n</i>	475	47	68

\* All data from *Biochem. Biophys. Res. Commun.* 233, 349(1997).

**TOXICITY:** Unknown

<b>FIRST AID:</b>	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.
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<b>Disclaimer:</b> <i>Materials from Biotium are sold for research use only, and are not intended for food, drug, household, or cosmetic use. Biotium is not liable for any damage resulting from handling or contact with this product.</i>
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