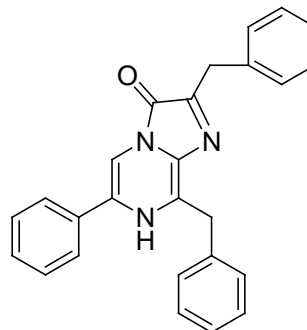


PRODUCT AND SAFETY DATA SHEET

PRODUCT NAME: **Coelenterazine 400A** (also known as **DeepBlueC**, a trademark of Packard BioScience Company)

CATALOG #: **10125/10125-1/10125-2**

MOLECULAR INFORMATION: C₂₆H₂₁N₃O
Mwt: 391.46

**PROPERTIES:****Color & Form**

Off-white to pinkish solid (light yellow in solution)

Purity

≥ 98% by HPLC

SolubilityHardly soluble in water. Stock solution can be made in ethanol at 1mM (or ~0.4mg/ml) concentration and stored at -20°C in the dark. **Avoid using DMSO** to dissolve the material as it may cause oxidation.**Luminescence**

The bioluminescence is centered around 400nm

STORAGE AND HANDLING:

Solution is susceptible to oxidation by air. If the ethanol stock solution is stored at < -20°C and kept away from light, the solution should be stable for at least a month. Under similar storage condition, the solid material should be stable for at least a year. Storing either the solid or the solution under argon or nitrogen should significantly improve the shelf live. Keep calcium free when stored in solution (avoid using glass container).

APPLICATION:

Coelenterazine 400a, also called DeepBlueC, is a coelenterazine derivative that serves as a substrate for *Renilla luciferase* (Rluc) and generates an emission peak centered around 400 nm. It is the best Rluc substrate for BRET studies because it has minimal interference with the emission of the GFP acceptor.

For BRET application, we recommend Dulbecco's Phosphate Buffered Saline (D-PBS) containing CaCl₂(0.1g/L), MgCl₂·6H₂O(0.1g/L) and D-Glucose(1g/L) supplemented with Aprotinin(2 µg/mL). Prepare a 20-fold (50 µM) dilution of the stock solution with the recommended buffer.

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

Luminescent Properties of Coelenterazine Products with Apoaequorin*

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
10124	<i>e</i>	405/465	0.5	4	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

*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

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.
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