

Product Information

COELENTERAZINE SAMPLER KIT

Product Number **CLZN-S**
 Storage Temperature $-20\text{ }^{\circ}\text{C}$

TECHNICAL BULLETIN

Product Description

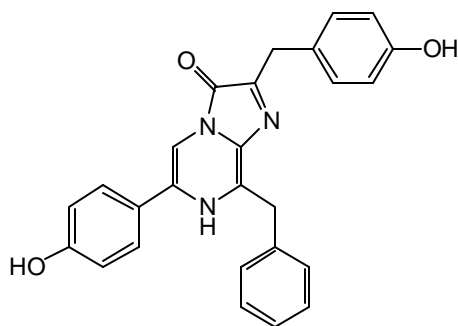
These coelenterazine products differ from each other in terms of luminescence wavelength, capacity, intensity, and half-rise time. They have wide applications in calcium imaging, diagnostic immunoassays, and high throughput drug screening.

Reagents

The Coelenterazine Sampler Kit contains 25 μg of each of the following products C 2230, C 2855, C 2980, C 3105, C 3230, C 3355, C 3480, C 3605, and C 3730.

Coelenterazine, native

Product Number: **C 2230**



Formula: $\text{C}_{26}\text{H}_{21}\text{N}_3\text{O}_3$

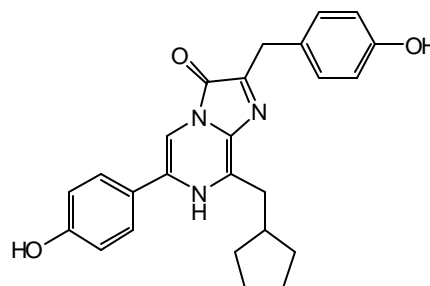
FW: 423.5

Synonym: 3,2-dihydro-2-(p-hydroxybenzyl)-6-(p-hydroxyphenyl)-8-benzylimidazo[1,2-a]pyrazin-3-one

Biochemical/Biophysical Activity: Luminophore of the aequorin complex, which is oxidized by oxygen to illuminate at 465 nm when Ca^{2+} binds to the complex. It is used to measure Ca^{2+} concentration in cells with high sensitivity and large dynamic range.

Coelenterazine cp

Product Number: **C 2855**



Formula: $\text{C}_{25}\text{H}_{25}\text{N}_3\text{O}_3$

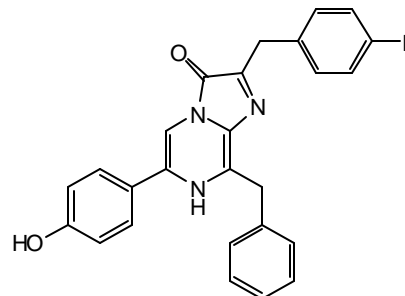
FW: 415.5

Synonym: CLZN-cp

Biochemical/Biophysical Activity: Synthetic derivative of native coelenterazine with 15 times higher luminescence intensity and faster response time.

Coelenterazine f

Product Number: **C 2980**



Formula: $\text{C}_{26}\text{H}_{20}\text{FN}_3\text{O}_2$

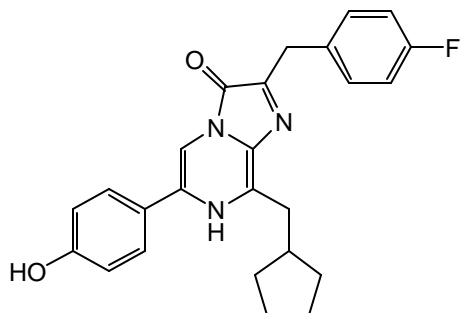
FW: 425.5

Synonym: CLZN-f

Biochemical/Biophysical Activity: Synthetic derivative of native coelenterazine with almost 20 times higher luminescence intensity and an emission maximum which is 8 nm longer.

Coelenterazine fcp

Product Number: **C 3105**



Formula: $C_{25}H_{24}FN_3O_2$

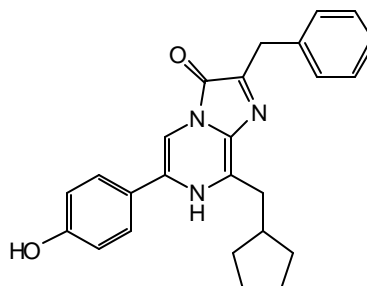
FW: 417.5

Synonym: CLZN-fcp

Biochemical/Biophysical Activity: Synthetic derivative of native coelenterazine with 135 times higher luminescence intensity.

Coelenterazine hcp

Product Number: **C 3355**



Formula: $C_{25}H_{25}N_3O_2$

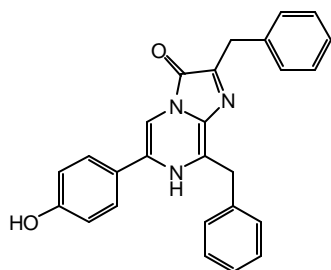
FW: 399.5

Synonym: CLZN-hcp

Biochemical/Biophysical Activity: Synthetic derivative of native coelenterazine with 190 times higher luminescence intensity with a faster response time.

Coelenterazine h

Product Number: **C 3230**



Formula: $C_{25}H_{21}N_3O_2$

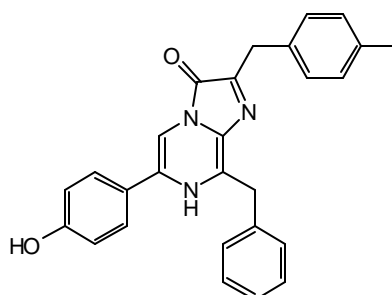
FW: 407.5

Synonym: CLZN-h

Biochemical/Biophysical Activity: Synthetic derivative of native coelenterazine with 10 times higher luminescence intensity.

Coelenterazine i

Product Number: **C3480**



Formula: $C_{26}H_{20}IN_3O_2$

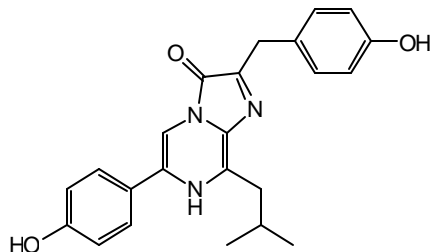
FW: 533.4

Synonym: CLZN-i

Biochemical/Biophysical Activity: Synthetic derivative of native coelenterazine with a luminescence intensity, which is about 3% of native coelenterazine with the slowest response time of all the derivatives.

Coelenterazine ip

Product Number: **C 3605**



Formula: $C_{23}H_{23}N_3O_3$

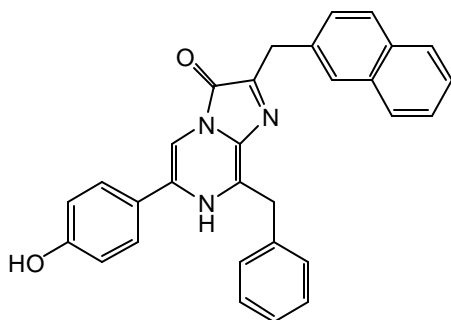
FW: 389.5

Synonym: CLZN-ip

Biochemical/Biophysical Activity: Synthetic derivative of native coelenterazine with almost 50 times higher luminescence intensity than native coelenterazine, but with a slower response time.

Coelenterazine n

Product Number: **C 3730**



Formula: $C_{30}H_{23}N_3O_2$

FW: 457.5

Synonym: CLZN-n

Biochemical/Biophysical Activity: Synthetic derivative of native coelenterazine with a luminescence intensity which is the weakest of all the coelenterazine derivatives and a much slower response time than the native form.

Precautions and Disclaimer

This product is for laboratory research use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

All of the coelenterazines are soluble in methanol and ethanol.

Storage/Stability

Store at $-20\text{ }^{\circ}\text{C}$, protected from exposure to light.

References

1. Fluck, R.A., et al., Slow calcium waves accompany cytokinesis in medaka fish eggs. *J. Cell Biol.*, **115**, 1259-1265 (1991).
2. Jones, K., et al., Glowing jellyfish, luminescence and a molecule called coelenterazine. *Trends Biotechnol.*, **17**, 477-481 (1999).
3. Dubuisson, M.L., et al., Antioxidative properties of natural coelenterazine and synthetic methyl coelenterazine in rat hepatocytes subjected to tert-butyl hydroperoxide-induced oxidative stress. *Biochem. Pharmacol.*, **60**, 471-478 (2000).
4. Teranishi, K., and Shimomura, O., Coelenterazine analogs as chemiluminescent probe for superoxide anion. *Anal. Biochem.*, **249**, 37-43 (1997).
5. Inouye, S., and Shimomura, O., The use of Renilla luciferase, Oplophorus luciferase, and apoaequorin as bioluminescent reporter protein in the presence of coelenterazine analogues as substrate. *Biochem. Biophys. Res. Commun.*, **233**, 349-353 (1997).

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