Coelenterazine h hydrochloride

Cat. No.: HY-D1024A

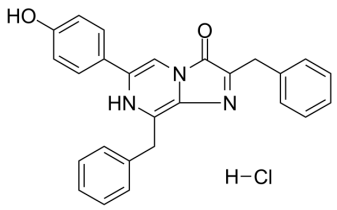
Molecular Formula: $C_{26}H_{22}ClN_3O_2$

Molecular Weight: 443.92

Target: Biochemical Assay Reagents; Calcium Channel

Pathway: Others; Membrane Transporter/Ion Channel; Neuronal Signaling

Storage: 4°C, protect from light, stored under nitrogen
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (225.27 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.2527 mL	11.2633 mL	22.5266 mL
	5 mM	0.4505 mL	2.2527 mL	4.5053 mL
	10 mM	0.2253 mL	1.1263 mL	2.2527 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Coelenterazine h (2-Deoxycoelenterazine) hydrochloride, a coelenterazine derivative, is a luminescent substrate for RLuc8. Coelenterazine h hydrochloride is more sensitive to Ca^{2+}, thus providing a valuable tool for measuring small changes in Ca^{2+} concentrations[1][2][3][4].

In Vitro

Coelenterazine h (1-10 μM) hydrochloride can be used as the luminescent substrate for RLuc8[4].
In the measurements of Ca^{2+} binding kinetics of BRAC, emission intensity of Venus (530 nm) from BRAC are monitored at 1 kHz just after rapid mixing of 5 nM BRAC protein with 20 μM coelenterazine-h hydrochloride in various concentration of Ca^{2+} buffer[4].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- J Biol Chem. 2023 Dec 1:105527.
- Stress Biol. 2024 Feb 16;4(1):14.

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REFERENCES

[1]. Jiang T, et al. New bioluminescent coelenterazine derivatives with various C-6 substitutions. Org Biomol Chem. 2017 Aug 23;15(33):7008-7018.

[2]. M R Knight, et al. Imaging calcium dynamics in living plants using semi-synthetic recombinant aequorins. J Cell Biol. 1993 Apr;121(1):83-90.

[3]. Kazushi Suzuki, et al. Five colour variants of bright luminescent protein for real-time multicolour bioimaging. Nat Commun. 2016 Dec 14:7:13718.

[4]. enta Saito, et al. Auto-luminescent genetically-encoded ratiometric indicator for real-time Ca2+ imaging at the single cell level. PLoS One. 2010 Apr 1;5(4):e9935.

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