

Manual for 6h-F Coelenterazine

Cat.# 348 6h-F Coelenterazine MW 409.46

Alternative names: 6h-F-CTZ, 8-benzyl-2-(4-fluorobenzyl)-6-benzylimidazo[1,2-a]pyrazin-3(7H)-one, C6d-f-coelenterazine, C6d-f-CTZ

General Notes: 6h-F-Coelenterazine (6h-F-CTZ) is a patented substrate for NLuc protein (NanoLuc, NanoKAZ, Oplophorus Luciferase) that shows higher luminescent activity than Furimazine.

Storage and Shelf-Life: It is best stored as completely dry powder under Argon in air-tight O-ring plastic tubes at -20°C or for longer storage at -80°C, protected from light. Oxygen and moisture will lead to auto-oxidation of 6h-F-CTZ over time, reducing its overall activity.

Dissolving 6h-F Coelenterazine: We recommend using our specifically developed NanoFuel Solvent (Cat. #399) for maximum solubility and shelf-life. Adding 500 µl to 500 µg of lyophilized 6h-F Coelenterazine will result in a 1 mg/ml solution that can be stored at -20°C or below for at least one year without any notable degradation.

As an alternative you may use Ethanol (200 proof) to dissolve 6h-F Coelenterazine. To prevent oxidation, it is recommended to acidify and degas the alcohol prior to addition.

Dilution and luminescent assaying: We recommend preparing the working solution fresh every time before a luminometer assay.

In general, a 100 µM 6h-F Coelenterazine solution will work with most assays. Use 409.5 µl of the 1 mg/ml stock solution and dilute in 10 ml of your buffer of choice (e.g. PBS) to get a 100 µM solution. All solutions should be at room temperature.

Figure: Luminescent kinetic of different CTZ analogues with NanoKAZ Luciferase (NLuc). 6h-F-CTZ (C6d-f-CTZ) is showing a higher luminescent activity than Furimazine while maintaining a glow style kinetic. Fig. from US patent: 9,567,623.

