

Native Coelenterazine CAS# 55779-48-1 MW 423.46

Alternative names: Natural Coelenterazine, Native Coelenterazine, Preluciferin, Coelenterate Luciferin, Apo Aequorin Luciferin

General Notes: Coelenterazine (CTZ) is the most abundant, naturally occurring luciferin in the world. It is the light energy storage molecule for most (over 75%) marine luminous animals.

Storage and Storage 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 CTZ over time, reducing its overall activity.

Dissolving 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 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 Coelenterazine. To prevent oxidation, it is recommended to acidify and degas the alcohol prior to addition.

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

In general, a 100 µM Coelenterazine solution will work with most assays. Use 423.5 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.

When performing a plate reader assay and you want to compare relative light units (RLU) results between the first well and last well in 96 plate, please note that CTZ will continuously oxidize over time in aqueous solutions (see graph, performed with two widely used buffers). To avoid the substrate oxidation and perform glow-kinetic style assays we recommend our GLuc Assay buffers (Cat. #319 and #320).

