

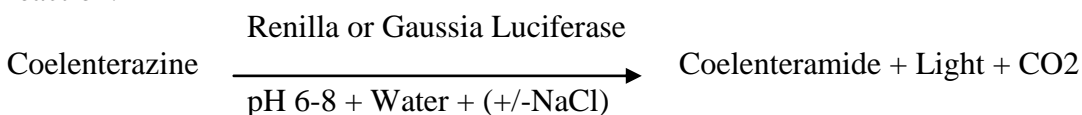
## HOW TO USE GUIDE

### COELENTERAMINE CAS# 37156-84-6

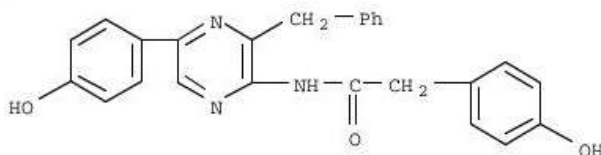
Benzeneacetamide,4-hydroxy-N-[5-(4-hydroxyphenyl)- 3-(phenylmethyl)pyrazinyl]

Coelenteramine is frequently misidentified in the literature, and internet search as “Coelenterazine” or “Coelenteramide.” Several sites have published incorrect CAS numbers, the number 37156-84-6 is the correct CAS number for Coelenteramine (the amine parent precursor to the synthesis of many “coelenterate-type” luciferins).

In the literature, confusion arises from un-established nomenclature in the early literature where many authors may describe “Coelenteramine” as the oxidation product of the reaction:

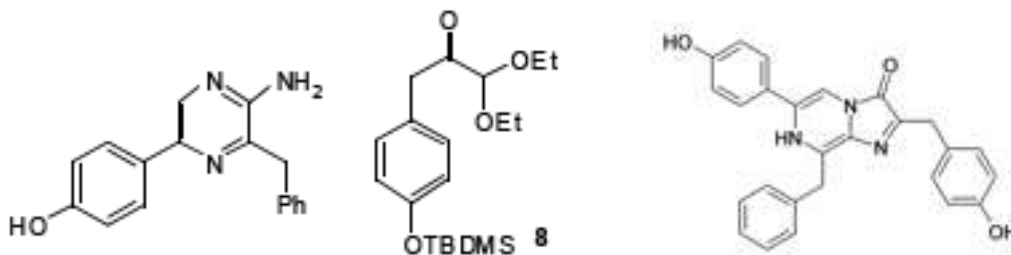


The correct oxidation product is Coelenteramide (the amide formed as a result of the oxidation of Coelenterazine in nature). Coelenteramide (NanoLight Cat#350) CAS# 50611-86-4 has the structure shown here:



Coelenteramine, (NanoLight Cat# 300 CLN) may be used in the synthesis of many of the synthetic “coelenterate-type” luciferin analog derivatives as originally described by several noted authors, O. Shimomura, H.Nakamura, and S. Inouye, (see references). These discoveries are the direct result of Dr. Osamu and Akemi Shimomura’s early study of the calcium activated photoprotein Aequorin, and its well known GFP. Most of the work was undertaken back in the early 1970’s. Several unusual properties of emission and spectra have been discovered and attributed to the many analog derivatives. Example: making Coelenterazine

Coelenteramine condensed with “glyoxyl” yields Coelenterazine:



By substituting the R groups on the “glyoxyl” many analogs can be made and tested.