

# Product Data Sheet

## *Ptilosarcus* Green Fluorescent Protein

Cat. No. 0311

### Product Description

*Ptilosarcus gurneyi* (orange sea pen, sea feather) is a species of soft coral that emits a strong green fluorescence when disturbed. The green fluorescent protein obtained from this organism exhibits nearly symmetrical excitation and emission peaks with a relatively small Stokes shift.<sup>1</sup> This is in contrast to the more commonly employed GFP from *Aequorea victoria* which has two wavelengths at which excitation occurs, and a broader emission spectra. Recombinant *Ptilosarcus* GFP has the same level of fluorescence as the native protein.<sup>2</sup>

### Product Specifications

Protein:	1mg (0311-1), 250µg (0311-2)
Long Term Storage:	2 years at -80°C Aliquot to avoid repeated freezing and thawing.
Short Term Storage:	1 month at 4°C
Formulation:	In: 10mM Na <sub>2</sub> HPO <sub>4</sub> , 140mM NaCl, 2 mM KH <sub>2</sub> PO <sub>4</sub> , 3mM KCl, 20% glycerol, pH 7.6
Molecular Weight:	26kDa by SDS- PAGE 22kDa

### Technical Information

#### Analysis

Length:	238 aa
Molecular Weight:	27,045
Molar Extinction Coefficient:	22,450
Isoelectric Point:	5.92
Excitation:	490nm
Emission:	510nm

### Instructions for Use

1. The measurement of fluorescence is instrument-dependent. Please follow the instructions for fluorescence measurements as described by the instrument manufacturer.

To determine the dose-response for a given application, prepare a dilution series of the GFP in phosphate buffered saline pH 7.3. An example is shown on the right.

### Material Safety Data

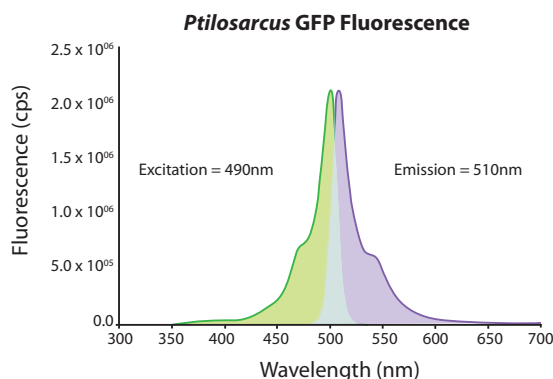
FOR RESEARCH USE ONLY. NOT INTENDED OR APPROVED FOR HUMAN, DIAGNOSTICS OR VETERINARY USE. Do not ingest, swallow or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. For complete safety information see full Material Safety Data Sheet.



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### Spectral Properties of *Ptilosarcus* GFP



The graph on the top shows the emission spectrum for *Ptilosarcus* green fluorescent protein. Excitation and emission peaks are almost symmetrical with a relatively small Stokes shift.<sup>1</sup>

### References

- <sup>1</sup> Labas, Y. A., Gurskaya, N. G., Yanushevich, Y. G., Fradkov, A. F., Lukyanov, K. A., Lukyanov, S. A., and Matz, M. V. 2002. Diversity and evolution of the green fluorescent protein family. Proc. Natl. Acad. Sci. USA. 99:4256-4261.
- <sup>2</sup> Bryan, B. J., Szent-Gyorgyi, C. 2001. Luciferases, fluorescent proteins, nucleic acids encoding the luciferases and fluorescent proteins and the use thereof in diagnostics, high throughput screening and novelty items. U.S. Patent No. 6,232,107.