

High brightness fluorescent calcium sensor

Useful for elucidating various biological mechanisms involving calcium ions

Overview

The inventors have previously developed G-CaMP and R-CaMP (CaMP) as proteinaceous fluorescent calcium sensors.

By introducing CaMP into a cell, the location of the cell can be identified and changes in calcium ion concentration can be observed as changes in CaMP fluorescence intensity.

- G-CaMP7, G-CaMP7.09: Displays green fluorescence.
- R-CaMP1.07: Displays red fluorescence and can be used in combination with the photo-stimulation probe Channelrhodopsin-2, which is commonly used for cell function manipulation.

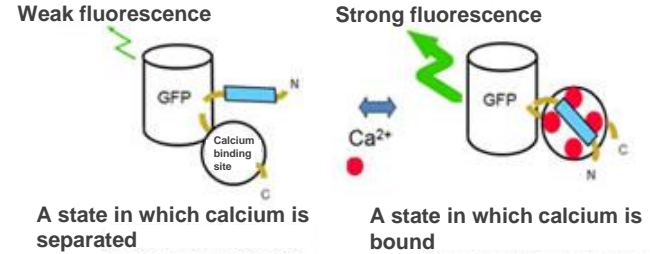
Product Application

- Elucidation of biological mechanisms
- Visualization of brain activity
- Observation of electrical coupling between transplanted cells and existing cells

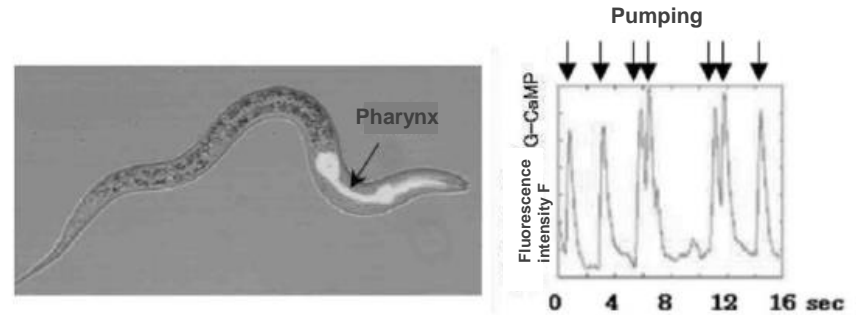
IP Data

IP No. : JP5669080, 7045680, JP6051438, JP6971461, JP5788160
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 Admin No. : T20-1178, T20-1180, T20-1182, T20-1183, T21-303

Operation mechanism of fluorescent calcium sensor(G-CaMP)



Application: Methods for evaluating the bioactivity of drugs using nematodes



By expressing CaMP in the pharyngeal muscle of *C. elegans*, the number of times the pharyngeal muscle pumps can be counted conveniently.

JP7045680

Related Works

- [1] 64 | VOL.12 NO.1 | JANUARY 2015 | nature methods
- [2] PLoS One. 2015 May 6;10(5):e0125354
- [3] 388 | NATURE | VOL 538 | 20 october 2016

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