



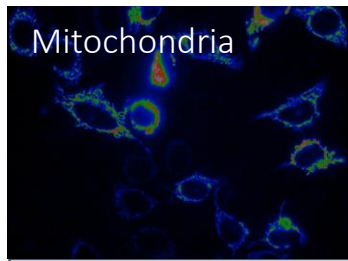
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Ca<sup>2+</sup>, ROS長效型螢光試劑

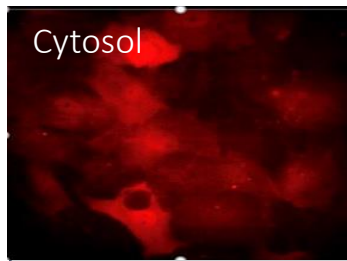
Ca<sup>2+</sup>, ROS long acting fluorescence assay

Genetically Encoded Tools:

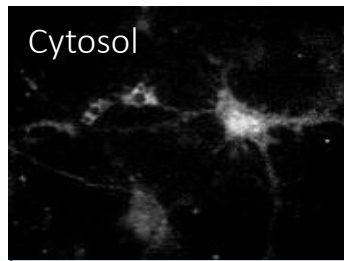
Protein based, nontoxic to cells for long term observations



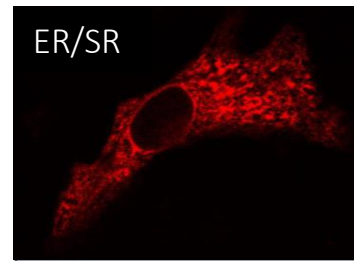
粒線體  
鈣離子量測



iPSC 分化之心肌細胞  
鈣離子量測



神經細胞  
鈣離子量測



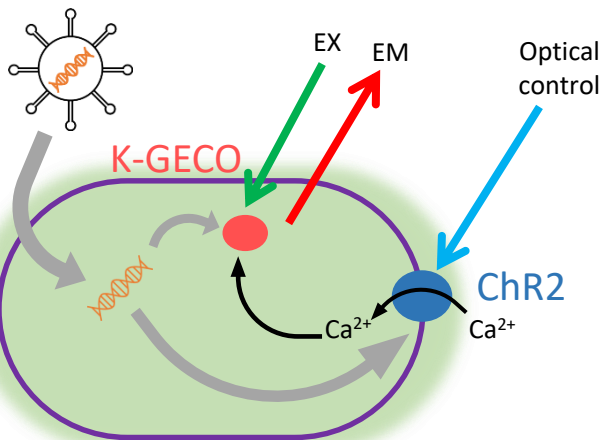
內質網  
鈣離子量測

實驗觀察幾個小時就滿足了嗎?

想知道在那之後會發生甚麼事嗎?

LumiSTAR帶您進入未知的領域

試劑原理示意圖



Tool Box:

Ca<sup>2+</sup> indicator

- Cytosol with ChR2
- Cytosol without ChR2
- Mitochondria
- ER/SR

ROS indicator

- Cytosol
- Mitochondria
- Peroxisome

Genetically Encoded Tools (protein-based indicators) 之特色

- **超長觀測時間** – 可長達2週
- 無細胞毒性 – 得到細胞最真實的反應
- 可表現在特定胞器
- 可提供不同顏色之 indicator (可依需求**客製化**)
- **各式細胞株皆適用**，包含 iPSC 分化之特定細胞
- 可和 **ChR2** 搭配，進行全光學控制和訊號讀取
- 可用於藥物篩檢及細胞功能性測試



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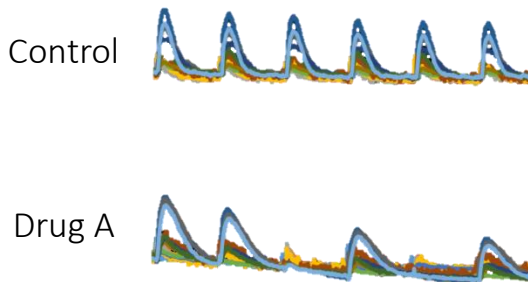
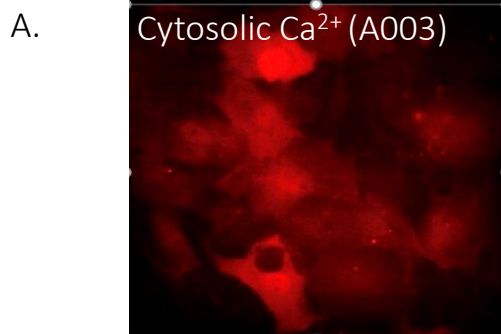
# Ca<sup>2+</sup>, ROS長效型螢光試劑

## Ca<sup>2+</sup>, ROS long acting fluorescence assay

Genetically Encoded Tools:

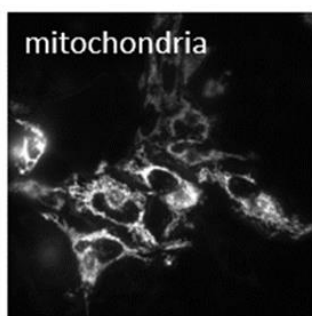
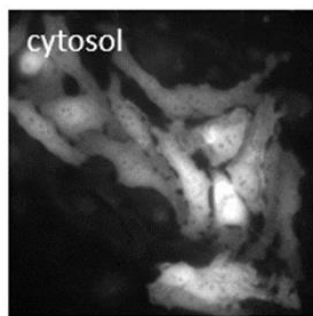
Protein based, nontoxic to cells for long term observations

### Examples of application:



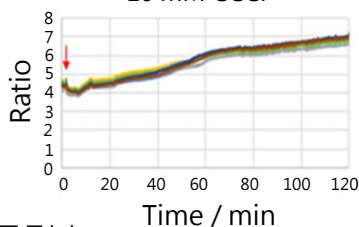
iPSC-derived cardiomyocytes expressing K-GECO after 24-48 hrs transduction, and then subject to drug testing

### B. Real-time ROS observation by roGFP



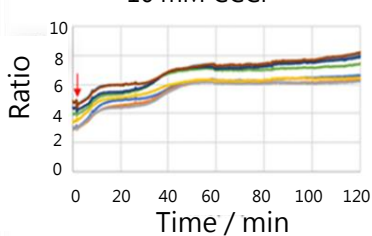
ROS-roGFP (B001)

10 mM CCCP

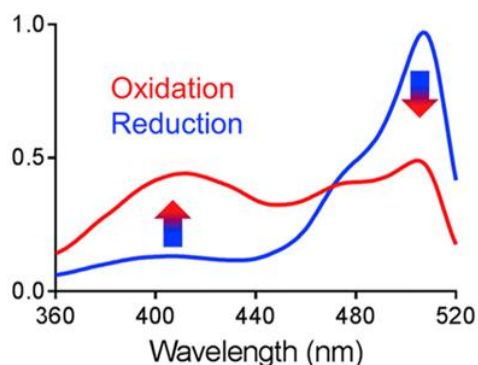


MtROS-roGFP (B002)

10 mM CCCP



### Spectral information



產品列表：

Drug Screening / Functional Assay	Cellular/Sub-cellular location	Excitation (nm)	Emission (nm)	Kinetic Range (Kd)	Catalogue Number
ER-LAREX-GECO	ER/SR	480 480, 590 (ratiometric)	590 600 (ratiometric)	560 μM	A001
Mt-LAR-GECO	Mitochondria	561	594	60 μM	A002
K-GECO	Cytosol	568	594	165 nM	A003
NIR-GECO	Cytosol	678	704	215 nM	A004
K-GECO + Chr2	Cytosol for K-GECO	568	594	165 nM	A005
NIR-GECO+ Chr2	Cytosol for NIR-GECO	678	704	215 nM	A006
ROS-roGFP	Cytosol	405, 488	510		B001
MtROS-roGFP	Mitochondria	405, 488	510		B002
perROS-roGFP	Peroxisome	405, 488	510		B003