# Fura Red

**Cat. No.:** HY-104056

**CAS No.:** 149732-62-7

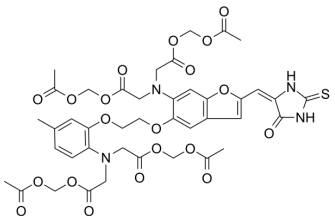
**Molecular Formula:** $C_{41}H_{44}N_4O_{20}S$

**Molecular Weight:** 945

**Target:** Fluorescent Dye

**Pathway:** Others

**Storage:** Please store the product under the recommended conditions in the Certificate of Analysis.



## BIOLOGICAL ACTIVITY

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| **Description** | Fura Red is a $Ca^{2+}$-sensitive fluorescent dye, which decreases in fluorescence with rising [$Ca^{2+}$][1]. |
| **In Vitro** | Guidelines[2] (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs).<br>Labeling of Cells:<br>1. Incubate the cells according to your normal protocol.<br>2. Suspend cells at 1x$10^7$ cells/mL in 37°C Hanks Balanced Salt Solution (HBSS) with 1 μM Fura Red, AM unless specified otherwise and 0.01% Pluronic F127, and incubate in a 37°C water bath for 30 minutes.<br>3. Wash cells in HEPES Buffered Saline Solution (HBSS with 1 mM $CaCl_2$, 0.5 mM $MgCl_2$, 0.1% BSA, 10 mM HEPES) and resuspend to 1x$10^7$ cells/mL in HEPES Buffered Saline Solution with viability dye, SYTOX Green.<br>4. Equilibrate cells for ≥10 minutes in a 37°C water bath.<br>5. Analyze sample on a flow cytometer, fluorescence microscopy, or fluorescence microplate reader. Ratiometric analysis of Fura Red is measured by excitation by the Violet laser (406 nm) and the Green laser (532 nm). Emission is detected by two different filter sets: increases in emission are monitored off the Violet laser (630LP and 660/20 BP), while a decrease in emission are detected off the Green laser (685LP and 710/50 BP).<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

## REFERENCES

[1]. Floto RA, et al. IgG-induced Ca2+ oscillations in differentiated U937 cells; a study using laser scanning confocal microscopy and co-loaded fluo-3 and fura-red fluorescent probes. Cell Calcium. 1995 Nov;18(5):377-89.

[2]. Wendt ER, et al. Ratiometric analysis of fura red by flow cytometry: a technique for monitoring intracellular calcium flux in primary cell subsets. PLoS One. 2015 Apr 2;10(3):e0119532.



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