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## DATASHEET

### Fura-2 AM (Cell permeant)

## Product overview

**Name** Fura-2 AM (Cell permeant)  
**Cat No** HB0780  
**Biological description** Fura-2 AM (Cell permeant) is a high affinity, cell permeable calcium indicator which is ratiometric and UV light excitable. AM ester derivative of [Fura-2](#).

Fura-2 AM (Cell permeant) can noninvasively be loaded into live cells by incubation and is widely used for ratio-imaging microscopy and measuring intracellular calcium elevations in neurons and other excitable cells.

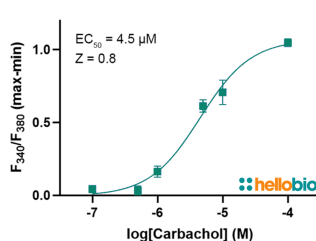
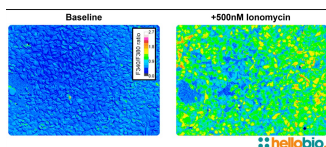
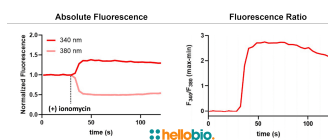
Excitation 340/380nm, Emission 505nm.

For optimal cell loading, F-127 is available either as a [10% solution in water \(HB16503\)](#) and [20% solution in DMSO \(HB9631\)](#).

**Biological action** Dyes & stains  
**Purity** >95%  
**Customer comments** *Reliable product - product worked well for live cell calcium imaging in multiple cell types i.e. primary hippocampal neurons and HEK293 kidney cells. **Verified customer, University College Dublin***  
*Reliable - I have tried Fura-2 AM across multiple cell types and in different assays. Works well and is reliable. **Verified customer, UEA: University of East Anglia***

**Description** High affinity, cell permeable calcium indicator which is ratiometric and UV light excitable

## Images



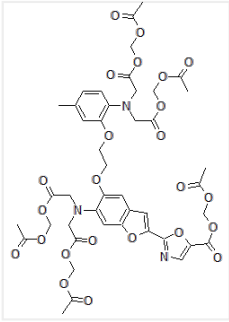
## Biological Data

**Application notes** Please follow our [Fura-2 AM protocol](#).

## Solubility & Handling

<b>Storage instructions</b>	-20 °C
<b>Solubility overview</b>	Soluble in DMSO
<b>Handling</b>	This compound is light sensitive; exposure to light may affect compound performance. We therefore recommend storing the solid material and any solutions in the dark and protecting from light.
<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

## Chemical Data

<b>Chemical name</b>	1-[2-(5-Carboxyoxazol-2-yl)-6-aminobenzofuran-5-oxy]-2-(2'-amino-5'-methyl-phenoxy)ethane-N,N,N',N'-tetraacetic acid, pentaacetoxymethyl ester
<b>Molecular Weight</b>	1001.9
<b>Chemical structure</b>	
<b>Molecular Formula</b>	C <sub>44</sub> H <sub>47</sub> N <sub>3</sub> O <sub>24</sub>
<b>CAS Number</b>	108964-32-5
<b>PubChem identifier</b>	3364574
<b>SMILES</b>	<chem>CC1=CC(=C(C=C1)N(CC(=O)OCOC(=O)C)CC(=O)OCOC(=O)C)OCCOC2=C(C=C3C(=C2)C=C(O3)C4=NC=C(O4)C(=O)OCOC(=O)C)N(CC(=O)OCOC(=O)C)CC(=O)OCOC(=O)C</chem>
<b>InChiKey</b>	VPSRLGDRGCKUTK-UHFFFAOYSA-N
<b>MDL number</b>	MFCD00036976
<b>Appearance</b>	Yellow solid
<b>Excitation</b>	340/380nm
<b>Emission</b>	505nm

## References

### Calcium imaging of cortical neurons using Fura-2 AM.

Barreto-Chang OL *et al* (2009) J Vis Exp -23  
**PubMedID** [19229178](#)

### Effects of transmitters and amyloid-beta peptide on calcium signals in rat cortical astrocytes: Fura-2AM measurements and stochastic model simulations.

Toivari E *et al* (2011) PLoS One 6(3)  
**PubMedID** [21483471](#)

### Fura-2 measurement of cytosolic free Ca<sup>2+</sup> in monolayers and suspensions of various types of animal cells.

Malgaroli A *et al* (1987) J Cell Biol 105(5)  
**PubMedID** [3680375](#)