

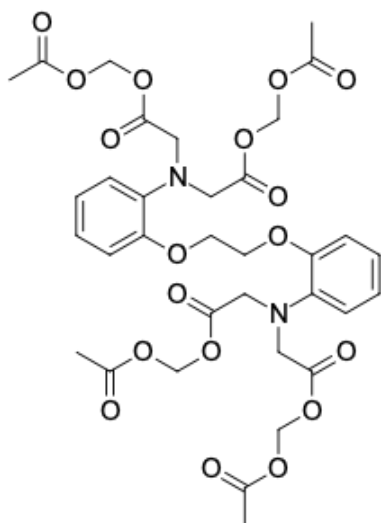
## BAPTA AM, calcium chelator

<http://www.lumiprobe.com/p/bapta-am-calcium-chelator>

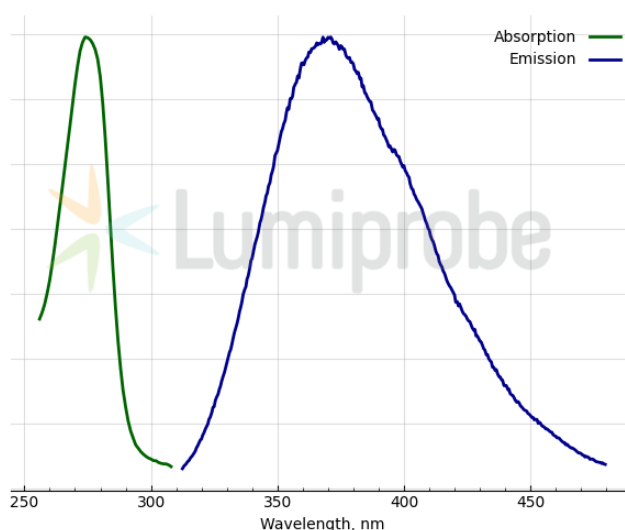
BAPTA AM is a membrane-permeable form of BAPTA, a highly selective calcium chelator. After loading into a cell, BAPTA AM is converted into BAPTA by cytoplasmic esterases. It is widely used for controlling the cytosolic calcium concentration ( $K_d = 0.11 \mu\text{M}$ ), inhibiting voltage-gated potassium (Kv) channels, and other applications evaluating the role of intracellular calcium in cell signaling.

BAPTA AM can also be used as a calcium indicator since its absorption maximum changes after complexing with calcium (absorption max. of free/complexed is at 254/274 nm, emission max. of free/complexed is at 363/363 nm).

The commonly used concentration of BAPTA AM for cell signaling studies is 10-100  $\mu\text{M}$ . Because AM esters have low water solubility, mild detergent (such as Pluronic® F-127) is necessary to facilitate loading into the cell.



**Structure of BAPTA AM, calcium chelator**



**Absorption and emission spectra of the Calcium ion-BAPTA complex**

### General properties

Appearance:	white to beige solid
Molecular weight:	764.69
CAS number:	126150-97-8
Molecular formula:	$\text{C}_{34}\text{H}_{40}\text{N}_2\text{O}_{18}$
IUPAC name:	N,N'-[1,2-ethanediylbis(oxy-2,1-phenylene)]bis[N-[2-[(acetyloxy)methoxy]-2-oxoethyl]-1,1'-bis[(acetyloxy)methyl] ester-glycine]
Solubility:	DMSO
Quality control:	NMR $^1\text{H}$ and HPLC-MS (95+%)
Storage conditions:	24 months after receipt at $-20^\circ\text{C}$ in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate.
Legal statement:	Product is offered and sold for research purposes only. Product is not tested for safety and efficacy in food, drug, medical device, cosmetic, no express or implied authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, for humans or animals or for commercial purposes.

### Spectral properties

Excitation/absorption maximum, nm:	274 (complex)
Emission maximum, nm:	372

Pluronic® F-127 is a registered trade mark of BASF.