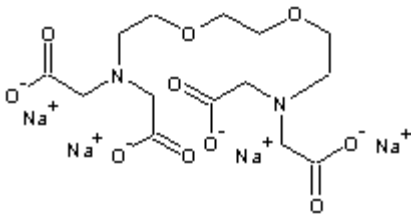
FT-JQ7670

EGTA tetrasodium salt

Product Description

Name :	**EGTA tetrasodium salt**
Catalog Number :	FP-JQ7670 1g
	FP-JQ7680 10ml (10mM aqueous solution)
Molecular Weight :	MW= 468,28
Solubility:	water



Storage: Store at room temperature. Protect from light and moisture
Expiration date is 12 months from the date of receipt

Introduction

EGTA is a water-soluble and cell-impermeable calcium chelator. It is useful for the determination of calcium in the presence of magnesium.

Directions for use

Sample Protocol for Calcium Measurement

Titrate the concentration of free Ca^{2+} in solution by mixing different amounts of K_2EGTA and CaEGTA. The reactions of these solutions with Fluo-3 or Fluo-8 dye should be at room temperature, pH 7.2 and 100 mM KCl. Under these conditions, the K_d for EGTA is 150 nM. Measure the Fluo-8 fluorescence intensity with a fluorescence microplate reader at Ex/Em = 490/525 nm.

1. Mix the relative volumes of K2EGTA (Cat. # JQ7680) and CaEGTA according to the following table.

Sample #	Volume K_2EGTA, µL	Volume CaEGTA, µL	Calculated free Ca^{2+}, µM	RFU
zero (blank)	1000	0	0	0
1	900	100		
2	800	200		
3	700	300		
4	600	400		
5	500	500		
6	400	600		
7	300	700		
8	200	800		
9	100	900		

2. Calculate the concentration of free Ca^{2+} in each solution using the following formula: $[Ca^{2+}]_{free} = K_d^{EGTA} \times \{[CaEGTA]/[K_2EGTA]\}$ (Note: the K_d of EGTA is 150 nM).
3. Add 1 µL of 1 mM Fluo-3 or Fluo-8 into each solution including the blank.
4. Read the fluorescence intensity of each solution with a fluorescent microplate reader at Ex/Em = 490/525 nm.

References

- **Alpini G.** *et al*., Development and characterization of secretin-stimulated secretion of cultured rat cholangiocytes, *Am J Physiol Gastrointest Liver Physiol*, 284: G1066 - G1073 (2003) Article
- **Banwait K.** *et al*., Role of nitric oxide in β3-adrenoceptor activation on basal tone of internal anal sphincter, *Am J Physiol Gastrointest Liver Physiol*, 285: G547 - G555 (2003) Article
- **Ling T.** *et al*., Identification and Characterization of the Acidic pH Binding Sites for Growth Regulatory Ligands of Low Density Lipoprotein Receptor-related Protein-1, *J. Biol. Chem.*, 279: 38736 - 38748 (2004) Article

Technical and scientific information

Related / associated products and documents

See Products Highlights, BioSciences Innovations catalogue and e-search tool.

- Fluo-3 AM, 78932A
- Fluo-8 AM, CP7502

Ordering information

Catalog size quantities and prices may be found at www.interchim.com/
Please inquire for higher quantities (availability, shipment conditions).

For any information, please ask : FluoProbes® / Interchim; Hotline : +33(0)4 70 03 73 06