

Product Data Sheet

Product Name: BAPTA tetrapotassium

Cat. No.: GC67211

Chemical Properties

Cas. No. 73630-08-7

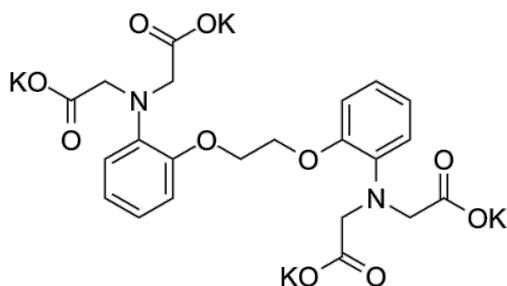
Formula $C_{22}H_{20}K_4N_2O_{10}$ M.Wt 628.79

Solubility H_2O : 125 mg/mL (198.79 mM; Need ultrasonic) Storage Store at $-20^{\circ}C$

General tips For obtaining a higher solubility , please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



Background

BAPTA tetrapotassium is a selective **chelator for calcium**. BAPTA, as calcium indicator, has high

Caution: Product has not been fully validated for medical applications. For research use only.

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selectivity against magnesium and calcium. BAPTA tetrapotassium is widely used as an intracellular buffer for investigating the effects of Ca^{2+} release from intracellular stores or influx via Ca^{2+} -permeable channels in the plasma membrane. BAPTA tetrapotassium can also inhibit **phospholipase C** activity independently of their role as Ca^{2+} chelators^{[1][2][4]}.

BAPTA (0.3-30 μM ; 1 h) can be used for the prevention of $[\text{Ca}^{2+}]$ -induced cell damage, but disturbs calcium signalling in single differentiated NH15-CA2 neuroblastoma and glioma hybrid cells^[3]. BAPTA (0-10 mM) inhibits phospholipase C (PLC) activity in a dose-dependent manner, and is unrelated to Ca^{2+} ^[2].

[1]. R Y Tsien, et al. New calcium indicators and buffers with high selectivity against magnesium and protons: design, synthesis, and properties of prototype structures. *Biochemistry*. 1980 May 27;19(11):2396-404.

[2]. Roger C Hardie, et al. Inhibition of phospholipase C activity in *Drosophila* photoreceptors by 1,2-bis(2-aminophenoxy)ethane N,N,N',N'-tetraacetic acid (BAPTA) and di-bromo BAPTA. *Cell Calcium*. 2005 Dec;38(6):547-56.

[3]. M B Collatz, et al. Intracellular calcium chelator BAPTA protects cells against toxic calcium overload but also alters physiological calcium responses. *Cell Calcium*

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