Product Data Sheet

Product Name: KMG-104
Cat. No.: GC64222

Chemical Properties

Cas. No.	852057-94-4		
Formula	C23H11F2NO6	M.Wt	435.33
Solubility	DMSO : 50 mg/mL (114.86 mM; ultrasonic and warming and heat to 80°C)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	KMG-104		

Background

KMG-104 is a highly selective fluorescent Mg2+ probe. KMG-104 has been used widely and revealed Mg2+ mobilization in cytoplasm in various types of cells[1].

KMG-104 is useful for confocal laser scanning microscopy because it is excited at 490 nm, and emitted fluorescence around 510 nm. Fluorescent intensity of KMG-104 increases with [Mg] increase, and it shows no response to Na, K, and Ca; the dissociation constant (Kd) for Mg is 3 mM. KMG-104 is able to trace only [Mg] change inphysiological conditions[2].PC12 cells are loaded with a novel Mg indicator KMG-104 and Ca indicator fura-2, and intracellular Mg is studied in the endoplasmic reticulums (ERs), mitochondria, and Mg-ATP[2].

[1]. Kubota T, et al. Investigation of intracellular magnesium mobilization pathways I PC12 cells B simultaneous Mg-Ca fluorescent imaging. J Am Coll Nutr. 2004;23(6):742S-4S.
[2]. Fujii T, et al. Design and synthesis of a FlAsH-type Mg2+ fluorescent probe for specific protein labeling. J Am Chem Soc. 2014;136(6):2374-2381.

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