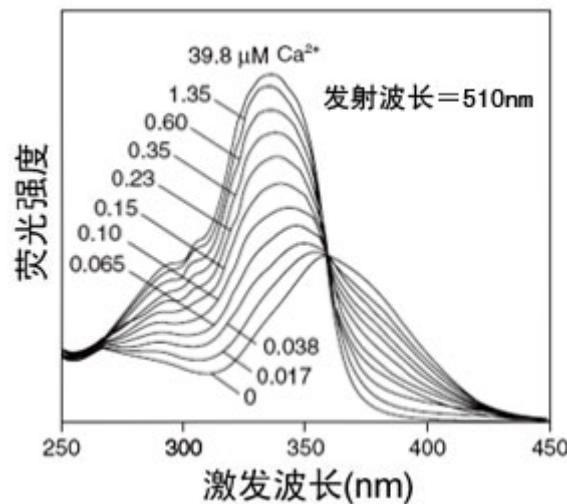


Fura-2 AM (钙离子荧光探针, 2mM)

产品编号	产品名称	包装
S1052	Fura-2 AM (钙离子荧光探针, 2mM)	50微升

产品简介:

- Fura-2 AM, 也称Fura-2 pentakis(acetoxymethyl) ester, 是最常用的检测细胞内钙离子浓度的荧光探针之一。分子式为C₄₄H₄₇N₃O₂₄, 分子量为1001.9。
- 本Fura-2 AM (钙离子荧光探针) 是配制于无水DMSO (anhydrous DMSO)中的储存液, 浓度为2mM。
- Fura-2 AM是一种可以穿透细胞膜的荧光染料。Fura-2 AM的荧光比较弱, 最大激发波长为369nm, 最大发射波长为478nm, 并且其荧光不会随钙离子浓度改变而改变。Fura-2 AM进入细胞后可以被细胞内的酯酶剪切形成Fura-2, 从而被滞留在细胞内。Fura-2可以和钙离子结合, 结合钙离子后在330-350nm激发光下可以产生较强的荧光, 而在380nm激发光下则会导致荧光减弱。这样就可以使用340nm和380nm这两个荧光的比值来检测细胞内的钙离子浓度, 可以消除不同细胞样品间荧光探针装载效率的差异, 荧光探针的渗漏, 细胞厚度差异等一些误差因素。Fura-2和钙离子结合后, 最大激发波长为335nm (最大激发波长随离子浓度的不同而有所不同), 最大发射波长为505nm。实际检测时推荐使用的激发波长为340nm, 发射波长为510nm。如果做双波长检测, 则推荐使用的激发波长为340nm和380nm。Fura-2的激发光谱参考下图, 不同曲线表示不同钙离子浓度时的激发光谱。



- Fura-2相对而言有较强的抗荧光淬灭能力, 在荧光显微镜或其它荧光检测设备上可以连续检测1小时而不明显影响其荧光效果。
- 用于细胞内钙离子检测时, Fura-2 AM的常用浓度为0.5-5μM。通常用含有0.5-5μM的Fura-2 AM的适当溶液和细胞一起在4-37°C孵育15-60分钟, 即可完成荧光探针的装载。

包装清单:

产品编号	产品名称	包装
S1052	Fura-2 AM (钙离子荧光探针, 2mM)	50微升
—	说明书	1份

保存条件:

-20°C避光保存, 6个月有效。

注意事项:

- 本Fura-2 AM在4°C、冰浴等较低温度情况下会凝固而粘在离心管管底、管壁或管盖内, 可以20-25°C水浴温育片刻至全部融解后使用。
- 荧光染料均存在淬灭问题, 请尽量注意避光, 以减缓荧光淬灭。
- 本产品仅限于专业人员的科学研究用, 不得用于临床诊断或治疗, 不得用于食品或药品, 不得存放于普通住宅内。
- 为了您的安全和健康, 请穿实验服并戴一次性手套操作。

使用本产品的文献:

1. Ji H, Wang L, Bi H, Sun L, Cai B, Wang Y, Zhao J, Du Z. Mechanisms of lumbrokinase in protection of cerebral ischemia. *Eur J Pharmacol*. 2008 Aug 20;590(1-3):281-9.
2. Bi J, Wang XB, Chen L, Hao S, An LJ, Jiang B, Guo L. Catalpol protects mesencephalic neurons against MPTP induced neurotoxicity via attenuation of mitochondrial dysfunction and MAO-B activity. *Toxicol In Vitro*. 2008 Dec;22(8):1883-9.
3. Guo RW, Wang H, Gao P, Li MQ, Zeng CY, Yu Y, Chen JF, Song MB, Shi YK, Huang L. An essential role for stromal interaction molecule 1 in neointima formation following arterial injury. *Cardiovasc Res*. 2009 Mar 1;81(4):660-8.
4. Yang LX, Guo RW, Liu B, Wang XM, Qi F, Guo CM, Shi YK, Wang H. Role of TRPC1 and NF-kappaB in mediating angiotensin II-induced Ca²⁺ entry and endothelial hyperpermeability. *Peptides*. 2009 Jul;30(7):1368-73.
5. Sun ZL, Niu RY, Su K, Wang B, Wang JM, Zhang JH, Wang JD. Effects of sodium fluoride on hyperactivation and Ca²⁺ signaling pathway in sperm from mice: an in vivo study. *ARCHIVES OF TOXICOLOGY*. 2010;84(5):353-61.
6. Shen W, Song D, Wu J, Zhang W. Protective effect of a polysaccharide isolated from a cultivated *Cordyceps* mycelia on hydrogenperoxide-induced oxidative damage in PC12 cells. *Phytother Res*. 2011 May;25(5):675-80.
7. Li C, Yang Z, Li Z, Ma Y, Zhang L, Zheng C, Qiu W, Wu X, Wang X, Li H, Tang J, Qian M, Li D, Wang P, Luo J, Liu M.. Maslinic acid suppresses osteoclastogenesis and prevents ovariectomy-induced bone loss by regulating RANKL-mediated NF-κB and MAPK signaling pathways. *J Bone Miner Res*. 2011 Mar;26(3):644-56.
8. Sun C, Wang L, Yan J, Liu S. Calcium ameliorates obesity induced by high-fat diet and its potential correlation with p38 MAPK pathway. *Mol Biol Rep*. 2012 Feb;39(2):1755-63.
9. Liu H, Han F, Shi Y. Effect of Calreticulin on Ca(2+)/CaM KinaseIIα and Endoplasmic Reticulum Stress in Hippocampal in a Rat Model of Post-traumatic Stress Disorder. *Neurochem Res*. 2013 Jul;38(7):1407-14.
10. Zhou J, Yang C, Wang J, Sun P, Fan P, Tian K, Liu S, Xia C. Toxic effects of environment-friendly antifoulant nonivamide on *Phaeodactylum tricornutum*. *Environ Toxicol Chem*. 2013 Apr;32(4):802-9.
11. Wang H, Yin G, Yu CH, Wang Y, Sun Z. Inhibitory effect of sanguinarine on PKC-CPI-17 pathway mediating by muscarinic receptors in dispersed intestinal smooth muscle cells. *Res Vet Sci*. 2013 Dec;95(3):1125-33.
12. Zheng B, Wu L, Ma L, Liu S, Li L, Xie W, Li X. Telekin induces apoptosis associated with the mitochondria-mediated pathway in human hepatocellular carcinoma cells. *Biol Pharm Bull*. 2013;36(7):1118-25.
13. Zhong L, Lv L, Yang J, Liao X, Yu J, Wang R, Zhou P. Inhibitory effect of hydrogen sulfide on platelet aggregation and the underlying mechanisms. *J Cardiovasc Pharmacol*. 2014 Nov;64(5):481-7.
14. Ren H, Teng Y, Tan B, Zhang X, Jiang W, Liu M, Jiang W, Du B, Qian M. Toll-like receptor-triggered calcium mobilization protects mice against bacterial infection through extracellular ATP release. *Infect Immun*. 2014 Dec;82(12):5076-85.
15. Zhou R, Ding XL, Liu LM. Ryanodine receptor 2 contributes to hemorrhagic shock-induced bi-phasic vascular reactivity in rats. *Acta Pharmacol Sin*. 2014 Nov;35(11):1375-84.
16. Liu Z, Cai H, Zhu H, Toque H, Zhao N, Qiu C, Guan G, Dang Y, Wang J. Protein kinase RNA-like endoplasmic reticulum kinase (PERK)/calcineurin signaling is a novel pathway regulating intracellular calcium accumulation which might be involved in ventricular arrhythmias in diabetic cardiomyopathy. *Cell Signal*. 2014 Dec;26(12):2591-600.
17. Liu J, Zhang Y, Li Q, Zhuang Q, Zhu X, Pan L, Cheng M. An improved method for guinea pig airway smooth muscle cell culture and the effect of SPFF on intracellular calcium. *Mol Med Rep*. 2014 Sep;10(3):1309-14.
18. Zhang Y, Yin H, Zhao X, Wang W, Du Y, He A, Sun K. The promoting effects of alginate oligosaccharides on root development in *Oryza sativa* L. mediated by auxin signaling. *Carbohydr Polym*. 2014 Nov 26;113:446-54.
19. Liu Y, Shen S, Li Z, Jiang Y, Si J, Chang Q, Liu X, Pan R. Cajanin stilbene acid protects corticosterone-induced injury in PC12 cells by inhibiting oxidative and endoplasmic reticulum stress-mediated apoptosis. *Neurochem Int*. 2014 Dec;78:43-52.
20. Xu X, Chen D, Ye B, Zhong F, Chen G. Curcumin induces the apoptosis of non-small cell lung cancer cells through a calcium signaling pathway. *Int J Mol Med*. 2015 Jun;35(6):1610-6.
21. Song X, Zhao C, Dai C, Ren Y, An N, Wen H, Pan LI, Cheng M, Zhang Y. Suppression of the increasing level of acetylcholine-stimulated intracellular Ca²⁺ in guinea pig airway smooth muscle cells by mabuterol. *Biomed Rep*. 2015 Nov;3(6):778-86.
22. Li H, Feng L, Jiang W, Liu Y, Jiang J, Zhang Y, Wu P, Zhou X. Ca(2+) and caspases are involved in hydroxyl radical-induced apoptosis in erythrocytes of Jian carp (*Cyprinus carpio* var. Jian). *Fish Physiol Biochem*. 2015 Oct;41(5):1305-19.
23. Wen L, Han F, Shi Y. Changes in the glucocorticoid receptor and Ca²⁺/calreticulin-dependent signalling pathway in the medial prefrontal cortex of rats with post-traumatic stress disorder. *J Mol Neurosci*. 2015 May;56(1):24-34.
24. Cao Z, Liu D, Zhang Q, Sun X, Li Y. Aluminum Chloride Induces Osteoblasts Apoptosis via Disrupting Calcium Homeostasis and Activating Ca²⁺/CaMKII Signal Pathway. *Biol Trace Elem Res*. 2016 Feb;169(2):547-53.
25. Wei NN, Lv HN, Wu Y, Yang SL, Sun XY, Lai R, Jiang Y, Wang K. Selective Activation of Nociceptor TRPV1 Channel and Reversal of Inflammatory Pain in Mice by a Novel Coumarin Derivative Muralatin L from *Murraya alata*. *J Biol Chem*. 2016 Jan 8;291(2):640-51.
26. Wang B, Zhao XH. Apigenin induces both intrinsic and extrinsic pathways of apoptosis in human colon carcinoma HCT-116 cells. *Oncol Rep*. 2017 Feb;37(2):1132-1140.

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