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VECTACELL TROLOX ANTIFADE REAGENT FOR LIVE CELL IMAGING

SKU: CB-1000-2



DESCRIPTION

VectaCell Trolox is an antifading additive for live cell imaging. It is a stock solution of the antioxidant Trolox (6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid) in filtered ethanol. Trolox is a water-soluble and cell-permeable analog of vitamin E that efficiently prevents formation of various reactive oxygen species, such as singlet oxygen (O_2), superoxide anion (O_2) or hydrogen peroxide (H_2O_2).

SPECIFICATIONS

Antifade	Yes
Microscopy	Fluorescence
Unit Size	2 ml

For research use only. Not intended for therapeutic or diagnostic use in animals or humans.

Storage Instructions	2-8 °C
Usage Summary	Instructions for use: Dilute the Trolox Solution into culture media or imaging buffer to a final concentration between 0.1 mM and 1 mM. Notes: The optimal working concentration of Trolox in imaging media will depend on the cell type and their tolerance to hypoxia. For cells that have low tolerance to hypoxia, or can be affected by the addition of ethanol, the appropriate controls should be included in the assay.
Applications	Immunofluorescence, Cellular Imaging
Concentration	100 mM (in ethanol)

TECHNICAL INFORMATION

VectaCell Trolox contains both Trolox and its oxidized form Trolox-quinone. This system reduces photo-bleaching and blinking during live cell imaging,[1, 2] and has also been shown to have a cytoprotective effect and low cytotoxicity for different cell lines.[3]

Trolox has been used to reduce fluorophore bleaching[1] as well as the fluorophore blinking[2] during the observation of fluorescent labels. Although the mechanism is not completely understood, it has been attributed to the combination of its oxygen-scavenger capacity that prevents oxidative bleaching and the complementary reduction reaction that helps prevent blinking.

VectaCell Trolox is supplied as a convenient 100 mM stock solution.

References:

1. Rasnik *et al*. Nonblinking and long-lasting single-molecule fourorescence imaging. (2006) Nat. Meth. 3:891-893
2. Cordes *et al*. On the Mechanism of Trolox as Antiblinking and Antibleaching Reagent. (2009) J. Am. Chem. Soc. 131:5018-5019
3. Wu *et al*. The cytoprotective effect of Trolox demonstrated with three types of human cells. (1990) Biochem. Cell Biol. 68: 1189-1194

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DOCUMENTS

- User Guide
- Safety Data Sheet
- Download CoA
- Datasheet

GALLERY IMAGES



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