

Product Data Sheet

Product Name: Esterase
Cat. No.: GC19922

Chemical Properties

Cas. No. 9016-18-6

Formula N/A M.Wt N/A

Solubility Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°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

Esterase, from pig liver, namely carboxylesterase, is responsible for the hydrolysis of carboxylesters into the corresponding alcohol and carboxylic acid. Esterase is principally expressed in tissues that

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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maintain a barrier function, including the epithelia of the lung and gut, liver, kidney and skin^[1]. Esterase is commonly used in vitro to verify whether esterases can hydrolyze or activate substrates, probes, or prodrugs. Esterase from porcine liver (0-25pg; 0-625amol) is used as a standard enzyme, with Fluorescein diacetate (FDA) as the fluorescent substrate, to establish a standard curve for esterase activity and to detect esterase activity in BY-2 tobacco cells and spruce embryogenic cells^[2]. Esterase (10μL; 1.66U/μL) is used to pretreat the synthesized probe for 3.5h to induce de-esterification in advance and evaluate changes in background fluorescence^[3].

References:

- [1] Hatfield MJ, Umans RA, Hyatt JL, et al. Carboxylesterases: General detoxifying enzymes. *Chem Biol Interact.* 2016;259(Pt B):327-331.
- [2] Vitecek J, Petrlova J, Adam V, Havel L, Kramer KJ, Babula P, Kizek R. A Fluorimetric Sensor for Detection of One Living Cell. *Sensors.* 2007; 7(3):222-238.
- [3] Watkins RW, Lavis LD, Kung VM, Los GV, Raines RT. Fluorogenic affinity label for the facile, rapid imaging of proteins in live cells. *Org Biomol Chem.* 2009;7(19):3969-3975.

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