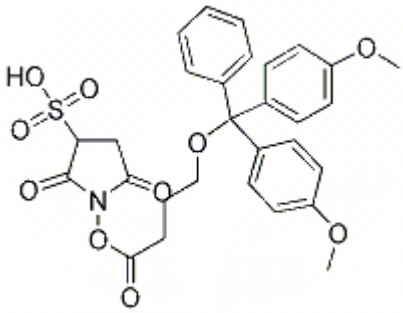
FT-35300A

Sulfo-SDTB

Product Description

Cat. number : 35300A, 50mg
Name: **Sulfo-SDTB**
Chemical Structure: Sulfosuccinimidyl-4-o-(4,4-dimethoxytrityl) butyrate
Molecular weight: 583.62
Storage: +4°C (L)



Product Information

Sulfo-SDTB is used in order to determine amino groups on matrice. The reaction between sulfo-SDTB and amino groups results in stable bonds at alkaline conditions. The simple determination of amino group is due to 4,4'-dimethoxytrytil, (absorbance at 498 nm; extinction coefficient at 70000 $M^{-1}cm^{-1}$) which is released after the reaction of sulfo-SDTB on amino groups. The unbound reagent must be removed before acidic developing solution is added, therefore the applications of this assay are limited to testing solid phase supports. This assay procedure may be developed for amine estimation of soluble proteins by binding the protein of interest to microwell plates, which would allow the washing off of excess reagent without removing the protein.

Directions for Use

Protocol: Quantification of Amine Groups Using Sulfo-SDTB:

- A stock buffer consisting of 50mM sodium bicarbonate, pH 8.5 was prepared. Amine bearing surfaces were cut and weighed. Sulfo-SDTB (3mg) was weighed and dissolved in 1ml dimethyl formamide. After thorough mixing, the sulfo-SDTB solution was brought up to a total volume of 50ml with the stock sodium bicarbonate buffer (working sulfo-SDTB solution). Stock buffer (1ml) and 1ml working sulfo-SDTB solution were added to each tube and reacted for 40 minutes at room temperature on an orbital shaker. Segments were then removed and washed twice in 5ml of distilled water on an inversion mixer. Immediately following the wash, 2ml of a perchloric acid solution was added to each segment. Segments were reacted for 15 minutes on the inversion mixer. The reaction solution (1ml) was then removed and absorbance at 498nm was measured. Using the extinction coefficient for sulfo-SDTB and the segment weight, amine content (pmoles)/Ti segment (mg) was determined

Reagent for R&D *in vitro* use only

Literature

- **Cunliffe D**. *et al*., Bacterial Adhesion at Synthetic Surfaces, Appl. Envir. Microbiol., 65: 4995 - 5002 (1999) Article
- **Donald** *et al*., Development of a Bioactive Surface for Titanium Implant Devices Donald J. Dempsey, Matthew D. Phaneuf, Frank W. LoGerfo, William C. Quist ; SOCIETY FOR BIOMATERIALS 28th Annual Meeting Transactions (2002)
- **Gaur, R.K, Gupta, K.C.** A spectrophotometric method for the estimation of amino groups on polymer supports. *Anal.Biochem*.180, 253-258. (1989)
- **Kikuchi A.** *et al*., Temperature-Modulated Interaction Changes with Adenosine Nucleotides on Intelligent Cationic, Thermoresponsive Surfaces, *Journal of Bioactive and Compatible Polymers*, 22: 575 - 588 (2007) Abstract

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