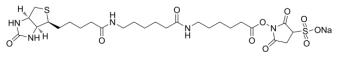
Sulfo-NHS-LC-LC-Biotin

Cat. No.:	HY-D1635
CAS No.:	194041-66-2
Molecular Formula:	$C_{26}H_{40}N_5NaO_{10}S_2$
Molecular Weight:	669.74
Target:	Fluorescent Dye
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Sulfo-NHS-LC-LC-Biotin (Biotin-XX-SSE), a biotin reagent, is used to label the proteins exposed to the external leaflet of intact exosomes and contains a larger spacer arm between the biotin and amine reactive linker. The size of this linker helps to overcome steric hindrance and increases labeling efficiency at the crowded exosome surface[1][2].
In Vitro	Biotinylation of exosome proteins: Two hundred micrograms of intact exosomes were mixed with 10 mM Sulfo-NHS-LC-LC-Biotin at room temperature for 30 min. Four conditions were taken into account during this experiment: (a) an excess of Sulfo-NHS-LC-LC-Biotin was used to favor a complete saturation of exposed lysine residues and potential N-terminus, (b) the presence of the sulfonate group in Sulfo-NHS-LC-LC-Biotin blocks the reagent from penetrating the exosomal membrane, (c) Sulfo-NHS-LC-LC-Biotin has an spacer arm of 30.5 angstroms which improves the biotinylation of proteins in their natural conformation, and (d) amino acids labeled with Sulfo-NHS-LC-LC-Biotin will have an increase in mass of 452 Da. After incubation, the excess of Sulfo-NHS-LC-LC-Biotin was removed using a 10 KDa MWCO filtration device[2]. Rat aortic endothelial cells (RAEC) were surface modified in suspension with 1 mM Sulfo-NHS-LC-LC-biotin for 10 min, followed by pelleting and resuspension in PBS[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Diaz G, et al. Changes in the Membrane-Associated Proteins of Exosomes Released from Human Macrophages after Mycobacterium tuberculosis Infection. Sci Rep. 2016 Nov 29;6:37975.

[2]. Gabant G, et al. Assessment of solvent residues accessibility using three Sulfo-NHS-biotin reagents in parallel: application to footprint changes of a methyltransferase upon binding its substrate. J Mass Spectrom. 2008 Mar;43(3):360-70.

[3]. Ilia Fishbein, et al. Post-Deployment Modifications of Stent with Endothelial Cells. CARDIOVASCULAR AND PULMONARY DISEASES, 24, SUPPLEMENT 1, S68, MAY 01, 2016.

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