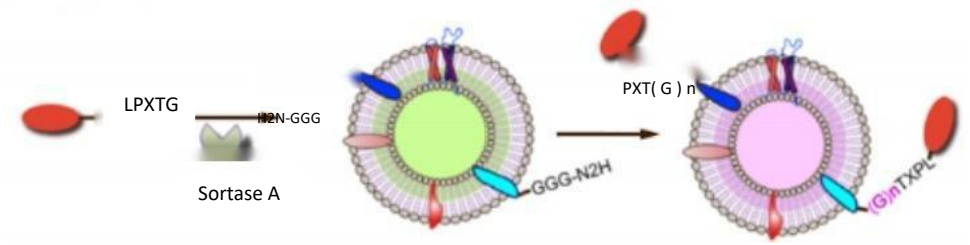
Exosome Surface Modification Kit (For SA-Biotin)

JOT-EV-02-06-01

Product Overview

This reagent is an efficient and versatile tool for protein modification.
The transpeptidase sortase A(SA) can specifically recognize the conserved amino acid sequence LPXTG contained at the C-terminus of the protein, causing the peptide bond between threonine and glycine in LPXTG to break. At the same time, it forms an acylase intermediate with the polyglycine (GGG) at the N-terminus of the protein to form a new peptide bond, completing the peptide transfer reaction and achieving covalent binding between the two proteins. There is a GGG structure at the N-terminus of some proteins on the surface of exosomes, and synthetic peptides or recombinant target proteins result in LPXTG sequences at the C-terminus of the peptides/target proteins. Therefore, under the action of SA enzyme, the peptide/target protein will be covalently modified on the surface of extracellular vesicles.



A schematic of Sortase A enzyme-mediated protein ligation

Components and Storage Conditions

Reagents	Specifications	Storage Conditions
Sortase A	5mL	-20 ℃
pH Regulate buffer	10 mL	RT

Protocol

1. Add 12.4 µL of SA into 4.65 µL of peptide/protein (500 µM).
2. Adjust the pH to 8.0 using pH Regulate buffer and incubate at 30℃ for 30 min.
3. Add 5×10^{10} exosomes.
4. Adjust pH to 8.0 with pH Regulate buffer and incubate at 30℃ for 2 h with shaking.

Precautions and Disclaimer

1. Incubation temperature is 30℃ for best results, do not incubate at room temperature or 37℃.
2. pH Regulate buffer has a pungent odour, please use in a fume hood.
3. Make sure the solution is well shaken when the reaction volume is small.
4. This product is limited to the scientific research use of professionals and shall not be used for clinical diagnosis or treatment, nor for food or medicine.

Life Science Production

The Science Centre, 1 Blaydon Road, Sandy, Bedfordshire, SG19 1RZ

Tel: +44 (0) 1234 889180 Email: sales@lifesciencegroup.co.uk Web: www.lifesciencegroup.co.uk