Recombinant SpyCatcher-Ferritin Protein

Summary

Code#	APK011
Protein	SpyCatcher fused with Ferritin protein
Reactivity	React with SpyTag fused proteins
Purity	Recombinant Expression and Affinity purified
Concentration	2mg/ml
Molecular weight	about 35 kDa
Formation	Liquid, 10 mM PBS pH 7.4
Storage	Store at –20 °C(Avoid freeze / thaw cycles)

Description

Recombinant SpyCatcher-Ferritin Protein is designed for conjugating with the antigen protein for immunization. The SpyCatcher can react with the SpyTag of the fused antigen proteins, and the Ferritin part can self-assemble into a spherical 24-meric particle and form an octahedral nanocage. The structurally designed SpyCatcher-Ferritin Protein can improve antigen-induced immune response in animals.

Background

The SpyCatcher-SpyTag system was developed seven years ago as a method for protein ligation. It is based on a modified domain from a Streptococcus pyogenes surface protein (SpyCatcher), which recognizes a cognate 13-amino-acid peptide (SpyTag). Upon recognition, the two form a covalent isopeptide bond between the side chains of a lysine in SpyCatcher and an aspartate in SpyTag. This technology has been used, among other applications, to create covalently stabilized multi-protein complexes, for modular vaccine production, and to label proteins. The SpyTag system is versatile as the tag is a short, unfolded peptide that can be genetically fused to exposed positions in target proteins; similarly, SpyCatcher can be fused to reporter proteins such as GFP, and to epitope or purification tags.

Benefits

High lot-to-lot consistency
Increased sensitivity and higher affinity
Animal-free production

Application notes

Conjugating with the antigen protein for immunization

1. Take 2 mg of SpyCatcher-Ferritin in a 5 mL EP tube.
2. Add an equimolar amount of SpyTag-antigen to the above 5 mL EP tube.
3. Vortex for 30 seconds to mix evenly.
4. Let it stand at room temperature for 30 minutes to complete the conjugation, obtaining the target antigen (SpyTag-antigen-SpyCatcher-Ferritin).
5. Use SDS-PAGE to check the antigen assembly before and after conjugation.

This product is for research use only and is not approved for use in humans or in clinical