Maleimide Activated hBSA *Optimized for Maximum Immunization Response*

Catalog Number: 5609
Unit Size: 5 x 1 mg

Product Details

Storage Conditions	Freeze (< -15 °C)
Expiration Date	12 months upon receiving

Chemical Properties

Appearance	Solid
Molecular Weight	N/A
Soluble In	Water

Spectral Properties

Excitation Wavelength	N/A
Emission Wavelength	N/A

Applications

Maleimide Activated hBSA enables the conjugation of sulfhydryl-containing peptide antigens to the immunogenic bovine serum albumin (BSA) carrier protein, enhancing immunization and antibody production. Modified with Sulfo-SMCC, hBSA becomes sulfhydryl-reactive, enabling the formation of covalent crosslinks with sulfhydryl (-SH) groups on cysteine residues of peptides and other thiol-containing haptens. This modification allows for the attachment of multiple antigen molecules per hBSA molecule, thereby increasing immunogenicity and enhancing the likelihood of eliciting high-titer antisera specific to target epitopes in immunized subjects. Hexamethylenediamine-modified BSA (hBSA) is produced by reacting native BSA with hexamethylenediamines, which effectively replace the majority of carboxyl groups with positively charged primary amines, yielding a highly cationized hBSA. This cationization significantly enhances the immunogenic characteristics of hBSA and increases the availability of conjugation sites for haptens, compared to native BSA. Furthermore, the increased density of primary amines facilitates a broader range of conjugation opportunities using conventional bioconjugation techniques. The alteration in the BSA structure also increases the spatial distance between the carrier protein and the hapten, which may enhance antigen presentation and subsequent immune recognition.