Maleimide Activated cBSA *Optimized for Maximum Immunization Response*

Catalog Number: 5608
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 cBSA facilitates the conjugation of sulfhydryl-containing peptide antigens to immunogenic bovine serum albumin (BSA) carrier proteins for immunization and antibody production. The purified, carrier-grade BSA is rendered sulfhydryl-reactive through chemical modification with a Sulfo-SMCC crosslinker, resulting in a maleimide-activated protein capable of forming covalent crosslinks with sulfhydryl (-SH) groups on cysteine residues of peptides and other thiol-containing haptens. This process allows the conjugation of multiple antigen molecules to each cBSA molecule, enhancing their immunogenicity and increasing the likelihood of eliciting high-titer antisera to the desired epitopes in immunized animals. As an immunogen, cationized BSA (cBSA) induces a significantly higher antibody response compared to native BSA. cBSA is produced by substituting the anionic carboxyl groups of native BSA with cationic aminoethyl-amide groups, thereby markedly enhancing its immunogenic properties. cBSA is effective in conjugation with both haptens and proteins, amplifying the immunological response to the conjugated molecule. This method eliminates the need for developing specific protocols for each antigen system, generating a stronger anti-peptide response than traditional carriers and enhancing the antibody response to proteins with low isoelectric points.