

## Cationized Bovine Serum Albumin (cBSA)

## Cationized Ovalbumin (cOVA)

Catalog # 9070 (cBSA) and 9071 (cOVA)

*For Research Use Only - Not Human or Therapeutic Use*

**DESCRIPTION:**

A cationized carrier protein for peptide conjugation

Peptides (less than 10 kDa) generally have very low antigenicity due to poor recognition by antigen presentation cells (APCs). In order to increase antigenicity, peptides should be conjugated to large molecule carrier proteins such as the widely used bovine serum albumin (BSA) or keyhole limpet protein. For anti-peptide antibody production, cationic carrier proteins are beneficial over typical carrier proteins for the following reasons: 1) cationic proteins can hold more peptides because they contain more structural primary amines which generally work as conjugation sites for peptides, and 2) positively charged cationic proteins can be selectively processed as a presented antigen because of their high affinity for the negatively charged cell surfaces of APCs. As carrier proteins with high antigenicity and peptide conjugation efficiency, cationized BSA (cBSA) (Cat # [9070](#)) and cationized ovalbumin (cOVA) (Cat # [9071](#)) were prepared by substituting negatively charged carboxyl groups with positively charged primary amines.

**APPLICATION:**

Use for peptide conjugation

**QUANTITY:**

10 mg

**FORM:**

Lyophilized (no buffer components)

**PURITY:**

>95%

**ISOELECTRIC POINT:**

>10

**CONJUGATION PROTOCOL:**

**A. CARRIER PROTEIN ACTIVATION:**

1. Dissolve 10 mg of cBSA or cOVA with 1 ml of PBS
2. Mix with 0.1 ml of sulfosuccinimidyl 4-[N-maleimidomethyl]cyclohexane-1-carboxylate (Sulfo-SMCC) (10 mg/ml in 0.05M phosphate buffered saline)
3. Incubate at room temperature for 1 hour
4. De-salt using gel filtration chromatography with PBS (e.g. Sephadex G-10)
5. Pool fractions collected from the first peak

**B. PEPTIDE COUPLING:**

1. Mix 1 ml of the pooled fraction with 1 ml of a sulfhydryl-containing peptide (10 mg/ml in 0.05M phosphate buffered saline).

NOTE: If the peptide is insoluble in 0.05M phosphate buffered saline, use a 6M Guanidine/0.1M Phosphate buffer pH 7.4 or 10-20% DMSO in 0.05M phosphate buffered saline.

2. Incubate at room temperature for 2 hours
3. Dialyze against 0.1M PBS pH 7.4 at 4°C

STORAGE: 4°C

STABILITY: 1 year

NOTES: Reagents for Immunizations:

1. Complete Freund's Adjuvant, 1 mg/ml ([Cat # 7008](#))
2. Complete Freund's Adjuvant, 2 mg/ml ([Cat # 7009](#))
3. Complete Freund's Adjuvant, 4 mg/ml ([Cat # 7001](#))
4. Incomplete Freund's Adjuvant ([Cat # 7002](#))

REFERENCES: N/A