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# Bovine Serum Albumin, pH 7.0

**Cohn Fraction V**  
**Cell Culture Tested**

**Product Code: TC194**

## Product Description :

Molecular Weight: 66kDa

CAS No.: 9048-46-8

Synonym: Albumin fraction V, Bovine albumin

Bovine serum albumin (BSA), also known as Albumin Fraction V is a protein derived from the serum of a cow. It is a single polypeptide chain consisting of about 583 amino acid residues. Fraction V gets its name "Cohn Fraction V" on account of its fractionation by the Edward Cohn purification methodology using cold ethanol precipitation. Serum albumin was obtained as the fifth fraction in the Cohn's method. It is often used in biochemistry as a protein concentration standard.

Albumin is a multifunctional protein that plays many important physiological functions in cell culture. Some of them are mentioned below:

- As a carrier molecule:

Albumin carries negative charge. It has multiple binding sites and free-radical trapping properties. It binds readily to  $\text{Ca}^{+2}$ ,  $\text{Na}^{+2}$ ,  $\text{K}^{+}$  and  $\text{Cu}^{+2}$  ions, free fatty acids, bilirubin, vitamins, drugs and hormones in culture media and assists transport of these molecules across the cell membrane.

- As a protectant:

Due to its multi-binding property, albumin helps remove pyrogens and toxic metals from the cells. It acts as a major antioxidant in cell culture media. It forms complexes with molecules that cause oxidative damage in non-bound state. These include bilirubin, free radicals, cysteine, glutathione, fatty acids, pyridoxal phosphate etc. Albumin also functions as pH buffer and shear protectant in agitated cell cultures. It is key element in regulation of osmotic pressure and fluid between cellular components.

BSA is also used in numerous biochemical applications including Enzyme Linked Immunosorbent Assays (ELISAs), immunoblots and immunohistochemistry.

## Quality Control:

### Appearance

White to yellow with tan to green cast powder.

### Solubility

Clear to slightly hazy faint yellow to yellow green solution at 4gm in 100ml of water

### pH of 10% solution in water

6.50 -7.50

### Residue on ignition

NMT 2%

### Loss on drying

NMT 5%

### Assay

NLT 98%

### Protein content

NLT 98%

### Cell Culture Test

Passes

## Storage and Shelf Life:

Store at 2°-8°C away from bright light.

Albumin solutions are more stable when stored in frozen conditions.

Albumin solutions tend to coagulate at high temperatures 50°C. Coagulation is irreversible.

For long term storage and sterile applications, Albumin solutions should be sterilized by filtering through a sterile membrane filter with a porosity of 0.22micron or less.

Shelf life is 36 months.

Use before expiry date given on the product label.

Revision : 1 / 2012

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