



R E A G E N T S

ALBUMIN FRACTION V (pH 7.0)

Synonym:	BSA
Catalog Number:	ALBA100, ALBA500
M:	approx. 68000 g/mol
CAS Number:	9048-46-8
Storage:	2-8°C
Origin:	from bovine serum
Assay (protein):	min. 98%
pH (2%, H₂O, 20°C):	6.6-7.5
Heavy metals:	max. 0.001%
Sulfated ash:	max. 3%
Loss on drying:	max. 3%
Fat:	max. 1.0%

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Comments:

Bovine serum albumin (BSA) is added as a stabilizing component for proteins/enzymes to several enzyme reactions and storage buffers. The concentration usually ranges from 0.01% (0.1 mg/ml; e.g. ref. 2) to 3% (30 mg/ml; e.g. ref. 1, 2). BSA is added to the 10X concentrated buffers of DNA-modifying enzymes or restriction enzymes in a concentration of 0.5 mg/ml (see e.g. ref. 6, 8). Alternatively, BSA can be substituted by gelatin for such purposes at the same concentration. Besides, albumin is applied as a blocking agent for blocking unbound surfaces of blotting membranes in immunoblots (3%; ref. 1, 2, 7) or ELISAs (3% in PBS, ref. 2) or for the dilution of antisera and antibody-stock solutions, respectively. As standard for protein determinations see ref. 9. This fraction of albumin has been manufactured by a combination of the heat-shock method and alcohol precipitation. Albumin is stable as powder (3 years) or in solution (biological buffers like PBS; one year at +4°C to -20°C). Stock solutions are prepared in concentrations up to 20%. If crystals are formed during storage of the solutions, they can be redissolved by warming up to 37°C and mixing. Usually, sodium azide is added at a final concentration of 2 mM (or 0.02 - 0.2%) to prevent microbial contaminations.

Literature:

- (1) Taylor, J.A. et al. (1995) Mol. Cell. Biol. 15, 4149-4157 Application: Blocking of free surfaces of immunoblots.
- (2) Reinhard, M. et al. (1995) EMBO J. 14, 1583-1589 Application: Blocking of free surfaces of immunoblots.
- (3) O'Neill, S.D. & Spanswick, R.M. (1984) J. Membrane Biol. 79, 231-2439 Stabilization of proteins during homogenization of plant tissue.
- (4) Fazekas de St. Groth, S. et al. (1963) Biochem. Biophys. Acta 71, 377-391 Standard for calibration curves for the determination of the protein concentration.
- (5) Peters, T.A. & Sjöholm, I. eds. (1977) Albumin: Structure, Biosynthesis, Function. FEBS 11th Meeting Copenhagen 1977 Vol. 50 Colloquium B9 [Pergamon Press].
- (6) Cobianchi, F. & Wilson, S.H. (1987) Methods Enzymol. 152, 94-110. Enzyme for the modification and labeling of DNA and RNA.
- (7) Harlow, E. & Lane, D. eds. (1988) Antibodies: A Laboratory Manual. Cold Spring Harbor.
- (8) Ausubel, F.A., Brent, R., Kingston, R.E., Moore, D.D., Seidman, J.G., Smith, J.A. & Struhl, K. eds. (2001) Current Protocols in Molecular Biology. Supplement 21, Page 3.4.2, Greene Publishing & Wiley-Interscience, New York.
- (9) Bradford, M.M. (1976) Anal. Biochem. 72, 248-254 Quantification of protein concentration in microgram-quantities.

Ordering information

Catalog N°	Size
ALBA100	100g
ALBA500	500g

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