
Product Data Sheet

Product Name: Bovine Serum Albumin (BSA)

Cat. No.: GC35542

Chemical Properties

Cas. No. 9048-46-8

SMILES S=B[*]

Formula M.Wt 66.43kDa

Solubility Water : 100 mg/mL Storage Store at -20°C, protect from light

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

Protocol

Samples are prepared in 96-well microplates and all wells without samples are filled with 200 µL PBS to minimize evaporation. To each well is loaded 100 µL SH-SY5Y growth medium with or without 10.000 SH-SY5Y neuroblastoma cells. The assay is started by adding 25 µL buffer, with or without 5 mg/mL sonicated Bovine Serum

Cell experiment: Albumin previously incubated for 0, 2 or 96 h at 70°C (giving a final BSA concentration of 1 mg/mL). All sample combinations are loaded in triplets, and for each of the six Bovine Serum Albumin combinations a corresponding triplet is loaded without cells, to be used as blank. One triplet is also loaded without both cells and BSA and one only without Bovine Serum Albumin[1].

Caution: Product has not been fully validated for medical applications. For research use only.

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References:

[1]. Holm NK, et al. Aggregation and fibrillation of bovine serum albumin. *Biochim Biophys Acta*. 2007 Sep;1774(9):1128-38.

Background

Bovine Serum Albumin (BSA) is a 583-residue protein consisting of three homologous all- α domains, organized in a heart-shaped structure. BSA is a globular protein that is used in numerous biochemical applications.

Bovine serum albumin (BSA) is a 583-residue protein consisting of three homologous all- α domains, organized in a heart-shaped structure. Bovine serum albumin constitutes ca. 60% of all plasma protein and binds and transports a large number of physiological and non-physiological ligands. Bovine serum albumin contains 17 disulfide bonds and one unpaired cysteine (Cys34), which facilitates dimerization and also influences higher-order association, since the rate of aggregation is slowed down if Cys34 is covalently bound to another compound. MTT assay for fibril cytotoxicity shows Bovine Serum Albumin is beneficial for cell growth irrespective of its aggregated state. Lack of cytotoxicity is confirmed by membrane permeabilization assays. In the subsequent 40 h, an increase in the viability of the treated cells of 300-400% is observed, indicating that the cells incubated with Bovine Serum Albumin achieve a higher viability than the untreated cells[1].

References:

[1]. Holm NK, et al. Aggregation and fibrillation of bovine serum albumin. *Biochim Biophys Acta*. 2007 Sep;1774(9):1128-38.

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