

Bovine Serum Albumin

Cat. No.:	HY-D0842
CAS No.:	9048-46-8
Target:	Biochemical Assay Reagents
Pathway:	Others
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)

BSA

SOLVENT & SOLUBILITY

In Vitro	H ₂ O : 50 mg/mL (Need ultrasonic) H ₂ O : 50 mg/mL (Need ultrasonic)
In Vivo	1. Add each solvent one by one: PBS Solubility: 100 mg/mL (Infinity mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description	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.
In Vitro	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] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay ^[1]	Samples are prepared in 96-well microplates and all wells without samples are filled with 200 μ L PBS to minimize evaporation. To each well is loaded 100 μ L SH-SY5Y growth medium with or without 10,000 SH-SY5Y neuroblastoma cells. The assay is started by adding 25 μ L buffer, with or without 5 mg/mL sonicated Bovine Serum 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] .
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CUSTOMER VALIDATION

- Sci Transl Med. 2024 Jan 24;16(731):eadf4590.
- EBioMedicine. 2021 Mar 11;65:103283.
- Cell Death Dis. 2022 Aug 9;13(8):695.
- Food Chem. 2022 Sep 26;403:134399.
- Br J Cancer. 2022 Jul 23.

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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.

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

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