Technical Data Sheet

GENERAL INFORMATION

PRODUCT	Recombinant Bovine Albumin, Diagnostic Grade, expressed in yeast. Powder format.
Cat. No.	MT10G-D1RBSAHC
QUANTITY	10 g
DESCRIPTION	Recombinant Bovine Serum Albumin (rBSA) is a non-animal albumin, equivalent to the common Bovine Serum Albumin (BSA), although heterologously expressed in yeast cells. rBSA is not only animal-free, but also free from *Escherichia coli* DNA contaminants. Due to its higher consistency and homogeneity than its bovine homologous, its superior performance effectively blocks non-specific binding, ensuring precise and reliable results in assays. Dried version of liquid rBSA.

PRODUCTS PROVIDED

Component		Amount
10G-D1RBSAHC	Recombinant Bovine Albumin. Powder.	1 container

DELIVERY CONDITIONS

10G-D1RBSAHC	10 g of dried rBSA.
SHIPPING CONDITIONS	This protein is shipped and can be stored at room temperature for 12 months.
SUGGESTED RECONSTITUTION BUFFER	1X PBS buffer (137 mM NaCl, 2.7 mM KCl, 10 mM Na_2HPO_4, 1.8 mM KH_2PO_4, pH 7.4).
RECONSTITUTION INSTRUCTIONS	1. Add 10 mL of the suggested Reconstitution Buffer for each gram of product to reconstitute the protein at 100 mg/mL (10%). 2. Gently pipette up and down to dissolve the solid powder. 3. Place on ice and aliquot into smaller volumes to avoid multiple freeze/thaw cycles. 4. Store from -20 °C to -80 °C.
STORAGE CONDITIONS	This powder product can be handled and stored at Room Temperature for at least 12 months. After reconstitution, the shelf life is 12 months if stored from -20 °C to -80 °C. Short-term storage at 4 °C is possible. To avoid multiple freeze/thaw cycles, store in multiple aliquots.

Levprot Bioscience, S.L.U.
Polígono Industrial La Charluca, Calle C,
Parcela M 10-11
50300 Calatayud, Zaragoza (Spain)
Tel. (+34) 976198404
support@levprot.com
www.levprot.com

ADDITIONAL INFORMATION

rBSA USAGE IN IMMUNOASSAYS

rBSA can replace animal-origin BSA in immunoassays, considering that rBSA performs between 20 and 100 times more efficiently than animal-origin BSA in ELISA. For this reason, it is recommended to dilute rBSA 1:20-1:100 to obtain similar results compared with animal-origin BSA. Please, check the section below for more information.

PERFORMANCE OF rBSA AS BLOCKING AGENT

BSA is a common protein used in immunoassays as a blocking agent. Since Levprot's rBSA is produced in yeast, performance of rBSA has been tested compared in several ELISAs with other animal-origin BSAs. As shown in the figure, to obtain a similar result between non-animal-derived rBSA and animal-origin BSAs, rBSA should be diluted between 20 and 100 times, to have a final concentration between 0.05 and 0.01%.

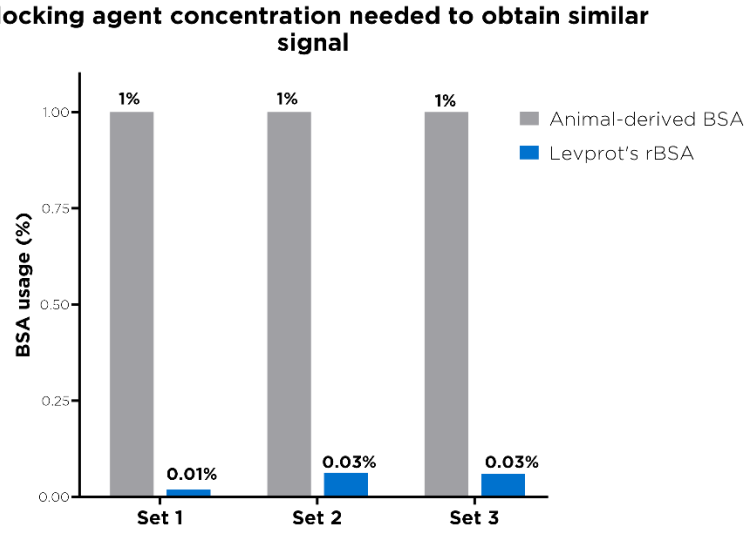

Figure. Illustration of percentage of animal-derived BSA and Levprot's rBSA necessary to obtain a similar signal in 3 different ELISAs. Ser 1 corresponds to a sandwich ELISA, set 2 and 3 correspond to indirect ELISAs.

Levprot Bioscience, S.L.U.
Polígono Industrial La Charluca, Calle C,
Parcela M 10-11
50300 Calatayud, Zaragoza (Spain)
Tel. (+34) 976198404
support@levprot.com
www.levprot.com

Since Levprot's rBSA performs higher than animal-derived BSA, non-specific signal is also evaluated at a recommended dilution. As shown in the figure below, when Levprot's rBSA is used at lower concentrations, the non-specific signal remains stable. Therefore, lower rBSA concentrations can be used while maintaining comparable levels of specific and non-specific signals in immunoassays such as ELISA.

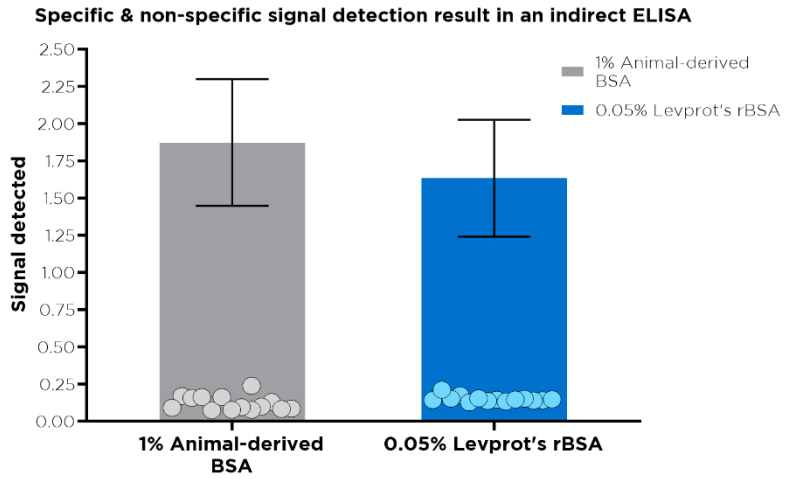

Image. Specific signal at a fixed concentration of antigen (bars) and non-specific signal detection without any antigen presence (dots). Grey bars and dots represent the values obtained with 1% of animal-derived BSA; while blue bars and dos represent the signal obtained with 0.05% of Levprot's rBSA.

QUALITY CONTROL

PROTEIN PURITY

Purity is determined by the ratio of absorbance at 260 and 280 nm and by SDS-PAGE. A 260/280 ratio between 0.55-0.9 is accepted and indicates low DNA contamination compared to the protein concentration. SDS-PAGE allows verification of protein band purity, with a purity level of >80% being acceptable.

PROTEIN CONTENT

Total protein content is determined as the ratio of protein concentration (measured by Bradford assay) to the dry powder mass. A w/w value greater than 0.4 mg/mg powder is considered acceptable.

E. coli DNA CONTAMINATION

20 µg of rBSA is screened for the presence of the specific gene *ybbW* from *Escherichia coli.* A C_q value higher than 35 is accepted.

Levprot Bioscience, S.L.U.
Polígono Industrial La Charluca, Calle C,
Parcela M 10-11
50300 Calatayud, Zaragoza (Spain)
Tel. (+34) 976198404
support@levprot.com
www.levprot.com

TECHNICAL SUPPORT

If you have any questions, feel free to contact us at
support@levprot.com

Consult the Safety Data Sheet for information regarding hazards and safe handling practises.

THIS PRODUCT IS INTENDED FOR RESEARCH USE ONLY.

DATE 20/05/2025
REV. TDS_MT10G-D1RBSAHC_rev.03

Levprot Bioscience, S.L.U.
Polígono Industrial La Charluca, Calle C,
Parcela M 10-11
50300 Calatayud, Zaragoza (Spain)
Tel. (+34) 976198404
support@levprot.com
www.levprot.com