SANTA CRUZ BIOTECHNOLOGY, INC.

BSA (25G7): sc-57504

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Bovine serum albumin (BSA) is an abundant plasma protein in cows that is important for maintaining osmotic pressure in blood plasma for proper distribution of body fluids between intravascular compartments and body tissues. BSA is a common buffer component for immunoglobulin type assays due to good solubility characteristics for water, Ca^{2+}, Na^{+}, K^{+}, fatty acids, hormones and bilirubin. BSA makes up about half of the protein in plasma and represents the most stable and soluble protein in the plasma. It is a suitable reagent for laboratories developing immunoassays, mostly due to its availability, solubility and the numerous functional groups present for coupling. The BSA component contains several lysines that are capable of reacting with conjugation sites of linkers, making it applicable as a carrier protein for antigenic compounds.

REFERENCES

1. Makinodan, T., et al. 1960. Demonstration of a normal serum macroglobulin coprecipitating with the bovine serum albumin (BSA)-chicken anti-BSA precipitate. J. Immunol. 85: 439-446.
2. Terman, D.S., et al. 1976. Specific removal of bovine serum albumin (BSA) antibodies *in vivo* by extracorporeal circulation over BSA immobilized on nylon microcapsules. J. Immunol. 116: 1337-1341.
3. Angelisova, P., et al. 1986. The characteristics of monoclonal antibodies against human albumin. Folia Biol. 32: 289-294.
4. Scott, T. and Eagleson, M. 1988. Concise Encyclopedia Biochemistry. New York: Walter de Gruyter.
5. Ediriwickrema, C.P., et al. 2000. Natural killer cell-dependent immunoglobulin G_{2a} anti-bovine serum albumin (BSA) response elicited by high molecular weight dextran-BSA conjugates associated with dextran-mediated macrophage-natural killer cell interaction. Immunology 101: 474-483.
6. Kooser, A., et al. 2003. Investigation of the antigen antibody reaction between anti-bovine serum albumin (a-BSA) and bovine serum albumin (BSA) using piezoresistive microcantilever based sensors. Biosens. Bioelectron. 19: 503-508.
7. Taguchi, Y., et al. 2004. Binding of estrogen receptor with estrogen conjugated to bovine serum albumin (BSA). Nucl. Recept. 2: 5.
8. Haroun, M. 2005. Bovine serum albumin antibodies as a disease marker for hepatitis E virus infection. J. Biomed. Biotechnol. 2005: 316-321.

SOURCE

BSA (25G7) is a mouse monoclonal antibody raised against BSA of bovine origin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-57504 X, 100 µg/0.1 ml.

APPLICATIONS

BSA (25G7) is recommended for detection of BSA of bovine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

BSA (25G7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

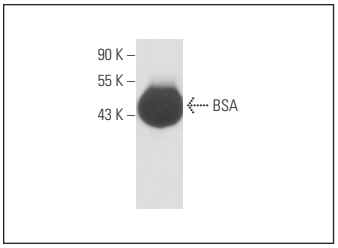
Molecular Weight of BSA: 67 kDa.

Positive Controls: EBTr cell lysate: sc-24669 or bovine PBL whole cell lysate.

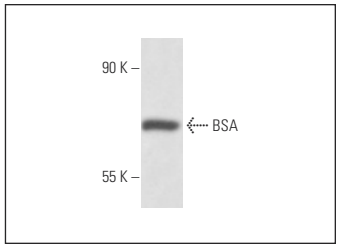
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



BSA (25G7): sc-57504. Western blot analysis of purified bovine serum albumin under reducing conditions.



BSA (25G7): sc-57504. Western blot analysis of BSA expression in bovine PBL whole cell lysate.

SELECT PRODUCT CITATIONS

1. Berschneider, B., et al. 2014. miR-92a regulates TGF-β1-induced WISP1 expression in pulmonary fibrosis. Int. J. Biochem. Cell Biol. 53: 432-441.
2. Mrschtik, M., et al. 2015. DRAM-3 modulates autophagy and promotes cell survival in the absence of glucose. Cell Death Differ. 22: 1714-1726.
3. Baarsma, H.A., et al. 2017. Noncanonical WNT-5A signaling impairs endogenous lung repair in COPD. J. Exp. Med. 214: 143-163.
4. Doerflinger, M., et al. 2021. Circulating BiP/Grp78 is a novel prognostic marker for sepsis-mediated immune cell death. FEBS J. 288: 1809-1821.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.