SANTA CRUZ BIOTECHNOLOGY, INC.

BSA (2A3E6): sc-32816

BACKGROUND

Bovine serum albumin (BSA) is an abundant plasma protein in bovines 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. Fuchtenbusch, M., et al. 1997. Antibodies to bovine serum albumin (BSA) in type 1 diabetes and other autoimmune disorders. Exp. Clin. Endocrinol. Diabetes 105: 86-91.
5. Ediriwickrema, C.P., et al. 2000. Natural killer cell-dependent immunoglobin G2a 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.

SOURCE

BSA (2A3E6) is a mouse monoclonal antibody raised against bovine serum albumin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

BSA (2A3E6) is available conjugated to agarose (sc-32816 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-32816 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-32816 PE), fluorescein (sc-32816 FITC), Alexa Fluor® 488 (sc-32816 AF488), Alexa Fluor® 546 (sc-32816 AF546), Alexa Fluor® 594 (sc-32816 AF594) or Alexa Fluor® 647 (sc-32816 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-32816 AF680) or Alexa Fluor® 790 (sc-32816 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

BSA (2A3E6) is recommended for detection of BSA of bovine origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with human, rabbit, canine, or Guinea pig albumins.

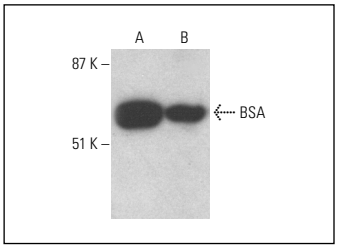
Molecular Weight of BSA: 67 kDa.

Positive Controls: MDBK cell lysate: sc-24736 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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



BSA (2A3E6) HRP: sc-32816 HRP. Direct western blot analysis of BSA expression in bovine PBL (**A**) and MDBK (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Feng, Y., et al. 2020. Rab27a dependent exosome releasing participated in albumin handling as a coordinated approach to lysosome in kidney disease. Cell Death Dis. 11: 513.
2. Lam, H.N., et al. 2021. Developing cyclic peptomers as broad-spectrum type III secretion system inhibitors in gram-negative bacteria. Antimicrob. Agents Chemother. 65: e0169020.

RESEARCH USE

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

PROTOCOLS

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