


Blocker™ BSA (10X)

Catalog Numbers 37520, 37525

Doc. Part No. 2160551 Pub. No. MAN0011285 Rev. B.0

 **WARNING!** Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from [thermofisher.com/support](https://www.thermofisher.com/support).

Product description

Thermo Scientific™ Blocker™ BSA is a 10% (w/v) solution of high-quality BSA that is useful for saturating excess protein-binding sites on membranes and microplates in immunoassays. It is most frequently diluted 10-fold (to 1% BSA) in 1X PBS or 1X TBS for initial testing. Blocker™ BSA is usually more effective than nonfat milk for biotin/avidin systems because it contains a single purified protein that is devoid of endogenous biotin. Blocker™ BSA may be used as a protein stabilizer for drying antigen- or antibody-coated microplates or used as a diluent when storing used antibody solutions. Blocker™ BSA can be used in western blotting applications targeting phosphoproteins.

Contents and storage

Product	Cat. No.	Amount	Storage
Blocker™ BSA in PBS (10X), 10% (w/v) bovine serum albumin in 10 mM sodium phosphate, 150 mM NaCl, pH 7.4 ^[1]	37525	200 mL	4°C
Blocker™ BSA in TBS (10X), 10% (w/v) bovine serum albumin in 10 mM Tris, 150 mM NaCl, pH 7.4 ^[1]	37520	125 mL	

^[1] Containing Kathon™ Antimicrobial Agent

Procedural guidelines

- Empirical testing is essential to determine the appropriate blocking reagent for your system. The proper blocking reagent can increase sensitivity and prevent non-specific signals caused by cross-reactivity between the antibody and the blocking reagent.
- Blocker™ BSA (10X) is supplied as a 10% solution and should be diluted before use. Dilute using either 1X TBS (Cat. No. 37520) or 1X PBS (Cat. No. 37525). Solutions containing 1-3% BSA are used for most applications. Other BSA concentrations may be beneficial for specific systems.
- A final concentration of 0.05% Tween™ -20 Detergent added to the Blocker™ BSA can improve blocking performance; however, it is not required nor recommended for all systems. Use only high-quality products such as Thermo Scientific™ Surfact-Amps™ 20 (Cat. No. 28320), which is a specially purified Tween™ -20 Detergent free of peroxides and carbonyls that may interfere in some systems.
- Blocker™ BSA diluted 10-fold and containing 0.05% Tween™ -20 Detergent may be used as a diluent for antibodies to improve signal-to-noise ratios.

Block western blots

1. Dilute Blocker™ BSA to the appropriate concentration using 1X TBS or 1X PBS.
2. After the protein transfer, remove the membrane from the transfer apparatus, then wash in deionized water for 5 minutes, using agitation to remove all transfer buffer.
3. Add sufficient diluted Blocker™ BSA to cover the membrane.
4. Incubate for 30 minutes to 2 hours at room temperature with shaking.
5. Continue with the western blotting procedure that is appropriate for your downstream detection.

Block ELISA plates

1. Coat the ELISA plate with antigen or antibody.
2. Dilute Blocker™ BSA to the appropriate concentration using 1X TBS or 1X PBS.
3. Add 300 µL of diluted blocking buffer to each well. Incubate plate for 30 minutes to 2 hours at room temperature or 37°C. Empty plate by aspiration or inversion.
4. Proceed with the ELISA protocol of that is appropriate for your downstream detection.
For storage, invert plate for approximately 2 hours to dry. Transfer plate to a plastic bag or other container containing a desiccant, such as silica gel. Store the plate at 4°C.

Block immunohistochemistry tissues

1. Add an appropriate volume of Blocker™ BSA to the tissue, then incubate for 30 minutes at room temperature or 37°C.
2. Pour off the blocking buffer. Do not rinse the tissue.
3. Continue with the immunohistochemical detection procedure that is appropriate for your downstream detection.

Related products

Table 1 Blocking buffers for western blotting

Select when	Product	Blocking agent	Highlights	Available formats
Optimizing a new western blot system or high background with current blocking buffer	StartingBlock™ Blocking Buffer	Serum- and biotin-free, single purified protein	<ul style="list-style-type: none"> • Performs well with a wide range of antibodies and antibody combinations • Compatible with streptavidin systems • Blocks in less than 15 minutes 	PBS TBS PBST TBST
Use when high background or antigen-antibody masking occurring with non-fat milk blockers	Blocker™ Casein	Purified casein	<ul style="list-style-type: none"> • Single purified protein blocking buffer provides fewer chances of cross-reaction with assay components than serum or milk solutions 	PBS TBS
Use when targeting phospho-proteins or when storing reused antibodies in blocker	Blocker™ BSA	Purified BSA	<ul style="list-style-type: none"> • 10% solutions of high-quality bovine serum albumin • Single purified protein provides fewer chances of cross-reaction with assay components than serum or milk solutions 	PBS TBS
Fluorescent western blotting	Blocker™ FL Fluorescent Blocking Buffer	Single purified protein	<ul style="list-style-type: none"> • Blocks excess nonspecific sites to help reduce background fluorescence • Detergent-free • Blocks in 15-30 minutes 	10X concentrate

Table 2 Additional products

Products	Learn more
Western blotting reagents and accessories	thermofisher.com/westernblot
Western blot imaging and analysis	thermofisher.com/westernimaging
ELISA reagents and kits	thermofisher.com/ELISA
ELISA plate readers	thermofisher.com/microplatereaders

Limited product warranty

Life Technologies Corporation and/or its affiliate(s) warrant their products as set forth in the Life Technologies' General Terms and Conditions of Sale at www.thermofisher.com/us/en/home/global/terms-and-conditions.html. If you have any questions, please contact Life Technologies at www.thermofisher.com/support.



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For descriptions of symbols on product labels or product documents, go to thermofisher.com/symbols-definition.

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Revision	Date	Description
B.0	17 September 2021	Updated format
A.0	15 October 2015	New document

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