

StartingBlock™ Blocking Buffers

Catalog Numbers 37578, 37538, 37539, 37579, 37542, 37543

Doc. Part No. 2161457 Pub. No. MAN0011493 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™ StartingBlock™ blocking buffers contain a single purified protein formulated in either phosphate-buffered saline (PBS) or Tris-buffer saline (TBS) for fast effective blocking of excess binding sites in western blots and ELISA assays. They are compatible with a wide range of antibodies, antibody combinations, and other protein probing and assay systems. StartingBlock™ blocking buffers do not contain albumin or endogenous biotin and, therefore are compatible with biotin/avidin systems. For ease of use, StartingBlock™ T20 blocking buffers contain the detergent, Tween™-20 at 0.05%, which can improve blocking performance in many western blot detection systems. StartingBlock™ blocking buffer is a good choice to use when optimizing a new western blot system or as a replacement of milk-based blocking buffers exhibiting high background or masking antigen-antibody binding. StartingBlock™ buffers can be used when stripping and reprobing western blots.

Contents and storage

Product	Cat. No.	Amount	Storage
StartingBlock™ (PBS) Blocking Buffer, single purified protein in phosphate-buffered saline, pH 7.5	37578	100 mL	4°C
StartingBlock™ (PBS) Blocking Buffer, single purified protein in phosphate-buffered saline, pH 7.5	37538	1 L	
StartingBlock™ T20 (PBS) Blocking Buffer, single purified protein in phosphate-buffered saline, pH 7.5 with 0.05% Tween™-20 Detergent	37539	1 L	
StartingBlock™ (TBS) Blocking Buffer, single purified protein in Tris-buffered saline, pH 7.5	37579	100 mL	
StartingBlock™ (TBS) Blocking Buffer, single purified protein in Tris-buffered saline, pH 7.5	37542	1 L	
StartingBlock™ T20 (TBS) Blocking Buffer, single purified protein in Tris-buffered saline, pH 7.5 with 0.05% Tween™-20 Detergent	37543	1 L	

Procedural guidelines

- StartingBlock™ buffers are supplied in a ready-to-use format and not intended to be diluted before use.
- Usage described in these instructions may differ from other blocking solutions.

Block western blots

Note: For best results, use StartingBlock™ T20 blocking buffer or add a final concentration of 0.05% Tween™ -20 Detergent to StartingBlock™ blocking buffer.

1. 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.
2. Add sufficient StartingBlock™ blocking buffer to cover the membrane.
3. **For direct methods** (i.e., using an enzyme-labeled primary antibody), incubate for 1-5 minutes at room temperature with shaking. **For indirect methods** (i.e., using an enzyme-labeled secondary antibody), incubate for 15-30 minutes at room temperature with shaking.
4. Continue with the western blotting procedure that is appropriate for your downstream detection.

Block ELISA plates

Note: It is not necessary to add Tween™ -20 to the blocking buffer when used for blocking ELISA plates. However, to increase signal-to-noise ratio, we recommend using StartingBlock™ T20 blocking buffer as the antibody diluent.

1. Coat the ELISA plate with antigen or antibody.
2. Add 300 µL of StartingBlock™ blocking buffer to each well, then empty plate by aspiration or inversion. Incubation is not required before emptying plate.
3. Proceed with the ELISA protocol 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.

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
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/microplateraders

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 history: Pub. No. MAN0011493

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

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