SwiftBlock™ Blocking Buffer (10X, Fast)

Introduction

SwiftBlock™ Blocking Buffer (10X, Fast) is a next-generation, rapid and efficient 10X concentrated blocking solution that can be diluted in PBS, TBS, or other appropriate buffers prior to use. This product contains no serum, albumin, biotin, or detergents, but includes preservatives that do not affect HRP or AP activity. It is suitable for blocking membranes or samples, as well as for diluting primary and secondary antibodies, in applications such as Western blot (WB), Immunofluorescence (IF), Immunohistochemistry (IHC), and Immunocytochemistry (IC).

This blocking buffer is fast and efficient, typically requiring only 5–15 minutes of blocking time. Compared to traditional blocking agents (e.g., BSA, non-fat dry milk, casein), it provides a superior signal-to-noise ratio. The absence of serum and albumin ensures an extremely high signal-to-noise ratio and very low background after blocking. It is compatible with horseradish peroxidase (HRP), alkaline phosphatase (AP), and biotin-labeled secondary antibodies. The 10X concentrated solution offers flexible usage: it can be diluted to 1X with PBS, TBS, or other suitable buffers for experiments, and detergents (e.g., Tween-20 or Triton X-100) can be added to a final concentration of 0.05%–0.1% as needed for blocking or antibody dilution.

This product is recommended for single use only, as repeated use often reduces blocking efficiency. However, for some primary antibodies with high signal-to-noise ratios (e.g., loading control antibodies), the buffer may be reused 2–3 times. Care should be taken to avoid mixing used blocking buffer with fresh, unused buffer.

Protocol

1. Preparation of Blocking Buffer (1X): Dilute SwiftBlock™ Blocking Buffer (10X, Fast) to 1X using PBS, TBS, or PBS/TBS containing 0.05%–0.1% Tween-20 or Triton X-100, according to experimental needs.
2. Membrane Blocking for Western Blotting
    a. Wash the membrane: After transfer is complete, wash the membrane in Western wash buffer for 1–2 minutes.
    b. Prepare the blocking buffer: Depending on the membrane size, pour an appropriate volume of the prepared Blocking Buffer (1X) into a suitable container (e.g., a petri dish) to ensure the solution fully covers the membrane. For a standard Western Blot experiment, approximately 10 mL of blocking solution is recommended for a membrane of about 6.6 × 8.5 cm.
    c. Transfer the membrane: Using flat-tipped forceps, hold one corner of the membrane and place it into the

blocking buffer prepared in the previous step, ensuring that the membrane is completely submerged.

d. Block the membrane: Place the container with the submerged membrane on an orbital shaker and block for approximately 10 minutes (typically 5–15 minutes is acceptable).

***Note:** Tests with a variety of antibodies have shown that blocking for 10 minutes is often significantly more effective than conventional blocking with BSA for 1 hour.

e. Antibody incubation: The blocked membrane is now ready for subsequent experiments such as primary antibody incubation.

3. Blocking for IF, IHC and Similar Experiments

In the relevant experimental steps, simply replace the traditional blocking buffer with Blocking Buffer (1X). The blocking time can typically be shortened to 10 minutes.

***Note:** Among the multiple primary antibodies tested, no significant difference in blocking efficacy was observed between 10 and 20 minutes of blocking, and blocking for 10 minutes was equivalent to or significantly better than conventional blocking methods.

Note

1. Storage and transportation conditions: 4°C storage, valid for one year; It can be stored at -20°C if not used for a long time. Blue Ice Transport.
2. For PVDF and NC films, the conventional blocking time is 5-15 minutes. If the antibody background is extremely high, try extending the blocking time to 30 to 60 minutes. If special needs are required, it is also feasible to enclose overnight at 4°C.
3. Related product recommendations are as follows:

Catalog No.	Product Name	Size
K4122	SwiftBlock™ Blocking Buffer (PBS, Fast)	100 mL/500 mL
K4123	SwiftBlock™ Blocking Buffer (PBSTw, Fast)	100 mL/500 mL
K4124	SwiftBlock™ Blocking Buffer (PBSTx, Fast)	100 mL/500 mL
K4125	SwiftBlock™ Blocking Buffer (TBS, Fast)	100 mL/500 mL
K4126	SwiftBlock™ Blocking Buffer (TBSTw, Fast)	100 mL/500 mL
K4127	SwiftBlock™ Blocking Buffer (TBSTx, Fast)	100 mL/500 mL
K4128	SwiftBlock™ Blocking Buffer (10X, Fast)	100 mL/500 mL
K4129	SwiftBlock™ Blocking Buffer for Western Blot (Fast)	100 mL/500 mL
K4130	SwiftBlock™ Blocking Buffer for Immunol Staining (Fast)	100 mL/500 mL
K4140	Primary Antibody Dilution Buffer for Western Blot (Fast)	100 mL/500 mL
K4662	Western Secondary Antibody Dilution Solution (Fast)	100 mL/500 mL
K4663	Immunol Staining Primary Antibody Dilution Solution (Fast)	100 mL/500 mL
K4664	Immunohistochemistry Secondary Antibody Dilution Solution (Fast)	100 mL/500 mL

4. This product is for scientific research use only.

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