TrueBlack® IF Background Suppressor System (Permeabilizing)

A buffer set that blocks non-specific antibody binding as well as direct interaction of fluorescent dyes on antibodies with cells or tissue sections.

Product attributes

Product Description

The TrueBlack® IF Background Suppressor System is a buffer system designed for optimal blocking of non-specific staining for immunofluorescence (IF). The buffers block background from both non-specific antibody binding as well as direct interaction of fluorescent dyes on antibodies with cells or tissue sections.

- Suppresses background from non-specific antibody binding and charged fluorescent dyes
- More efficient than Image-iT® FX, block & permeabilize in just 10 minutes
- Complete system for blocking, permeabilizing, and antibody dilution
- Non-mammalian blocking agents, for broad secondary antibody compatibility
- For staining of cells or tissue sections

Components

- **TrueBlack® IF Background Suppressor**
  Blocks background from non-specific binding of proteins & charged dyes
- **TrueBlack® IF Blocking Buffer**
  Excellent general blocking agent & antibody diluent

Non-specific signal in immunofluorescence can arise from multiple sources, including antibody cross-reactivity with off-target proteins, non-specific antibody adsorption to the sample, and autofluorescence. Another potential cause of background that is not well-known is the effect of fluorescent dyes themselves on the specificity of labeled antibodies. Next-generation fluorescent dyes like Alexa Fluor® or CF® dyes often carry multiple negative charges to improve dye solubility and brightness of conjugates. However, the extra charge carried by the dye can result in non-specific antibody binding and background fluorescence, which can affect signal-to-noise of immunostaining, particularly for low abundance targets. While conventional blocking agents like BSA, gelatin, or casein can reduce non-specific protein binding, they are not effective at blocking background from charged dyes.

TrueBlack® IF Background Suppressor blocks both non-specific protein binding as well as background from charged dyes. The buffers can be used for both blocking and antibody dilution. For some antibodies, best results are obtained when the Background Suppressor is used for blocking and the Blocking Buffer is used for antibody dilution. The Blocking Buffer alone also can provide excellent results when used for both blocking and antibody dilution for conjugates that do not carry excess charge. We recommend testing the different buffers to find the combination that works best for your antibody. Examples of charged dyes that show improved signal to noise with the Background Suppressor are CF®405S, CF®405M, Alexa Fluor® 647, and Cy®5.5

The buffers in the TrueBlack® IF Background Suppressor System (Permeabilizing) contain non-mammalian based blocking agents plus detergent for simultaneous blocking and permeabilization for intracellular immunofluorescence. The Background Suppressor contains additional blocking agents for suppressing background from charged dyes. The kit (Cat. No. 23012-T and 23012) includes the buffers in dropper bottles for easy dispensing. TrueBlack® IF Blocking Buffer (Permeabilizing) is also available as a standalone product supplied in screw-cap bottles.

The TrueBlack® IF Background Suppressor System (Permeabilizing) belongs to our TrueBlack® line of background reducing agents for fluorescence applications, which includes TrueBlack® Lipofuscin Autofluorescence Quencher for tissue staining, and TrueBlack® WB Blocking Buffer Kit for western blotting.

References

Download a list of CellBrite® and MemBrite® References.