

Technical Data Sheet

CleanBlot Background Minimizer

for immunodetection

Order number: 1056

In addition to the standard product, we offer a mild (order number 1471, on request) and a strong version (order number 2424, on request) of this article.

CleanBlot Background Minimizer is a *ready-to-use* dilution buffer developed for minimizing background signals in immunoassays, such as Western Blotting, ELISA, EIA, RIA, protein arrays and immuno-PCR. It prevents and significantly reduces nonspecific binding, low- and medium affinity cross-reactivities and matrix effects (coming for example from blood sera or plasma specimen). In contrast, high affinity binding between antibody and antigen is not negatively affected. As a result, the quality of detection and the reliability of results is significantly improved.

CleanBlot Background Minimizer does not influence the enzymatic activity of alkaline phosphatase (AP) or of peroxidase (HRP) negatively. Sometimes users detect an increase of enzymatic activity when applying the labeled detection antibody in CleanBlot Background Minimizer.

CleanBlot Background Minimizer is free of phosphate. It contains 0.045 % ProClin® 300 (v/v) as a preservative.

What does “matrix effect” mean?

Most of the so-called matrix effects are based on unwanted low or medium affinity binding of matrix components (e.g. serum proteins from human serum specimen) to the analyte or antibody.

Both, antibody and analyte can be masked by proteins or other components of the specimen. Thus, the binding between antibody and analyte is restricted. CleanBlot Background Minimizer reduces the interference by the matrix components.

The advantages of CleanBlot Background Minimizer

- x No platform yet known, where it doesn't work. ELISA, Lateral flow, automated bead-based assays, immunohistochemistry, Western blotting, Luminex, protein arrays and so on.
- x Independent of matrix such as blood, serum, CSF, tissue, animal blood e.g. from pig or horse, stool, urine, food samples, feed samples and so on.
- x Reduction of false-positives and false-negatives.
- x Better reliability and robustness of assays.



Application

CleanBlot Background Minimizer is a dilution buffer for specimens (e.g. serum or plasma) and/or for antibodies, depending on the type of interference. Sample or detection antibodies are diluted directly with the buffer. Only in competitive assays and some applications of immunohistochemistry it can be useful to dilute CleanBlot Background Minimizer in water or physiological buffers.

Caution: CrossFroxx is not appropriate for blocking the membrane's surfaces. For blocking we recommend one of our ready-to-use Blocking solutions, such as BSA blocking solution (1550), Peptide blocking solution (BSA-free) (1095) or Casein high-end blocking solution (1080).

Immediately before use the buffer should be mixed thoroughly. This is very important particularly when CleanBlot Background Minimizer is stored at -20°C.

1. Dilution of the specimen: Standards and specimen for ELISA and protein arrays can be diluted with CleanBlot Background Minimizer at 1:2 or higher. Standards and specimen should be treated strictly the same way.
2. Dilution of antibodies: Antibodies can be diluted with CleanBlot Background Minimizer in a user-defined manner, depending on the recommendation of the data sheet of the antibodies. That applies to primary and secondary antibodies.

CleanBlot Background Minimizer and polyclonal antibodies: Polyclonal antibodies consists of many different antibodies with different binding affinities. CleanBlot Background Minimizer only allows high affinity binding whereas low and medium affinity binding is reduced. Depending on the antibody quality, it can therefore be necessary to increase the antibody concentration moderately in combination with CleanBlot Background Minimizer.

Storage

It is possible to store CleanBlot Background Minimizer at 2-8°C, or at -20°C. The shelf life of the unopened bottle is 2 years. The buffer tolerates several cycles of freezing and thawing.

Related products

- 5555 WesternFroxx Kit anti-mouse HRP for immunodetection
- 6666 WesternFroxx Kit anti-rabbit HRP for immunodetection
- 1123 Protein Ladder (11-245 kDa), prestained for molecular biology
- 5560 ECL Xtrasensitivity Kit for immunodetection
- 1550 BSA blocking solution for immunodetection
- 1080 Casein high-end blocking solution for immunodetection
- 1095 Peptide blocking solution (BSA-free) for immunodetection
- 1102 Acrylamide Xtra solution 30 % - Mix 37.5:1 for electrophoresis
- 1554 Acrylamide Xtrapure for biochemistry