

ASSAY DEFENDER®

Total HAMA and interference blocker

Ready-to use assay diluent for reduction of interference caused by HAMA (human anti-mouse antibodies), rheumatoid factors, nonspecific binding, cross-reactivities and matrix effects.

Interference in immunoassays can cause false positive and false negative results in routine testing. Reasons for the increasing prevalence of different kinds of interference are for example:

- population aging
- a growing number of patients with:
 - chronic autoimmune diseases
 - allergic and inflammatory diseases
- a better limit of detection in modern assays
- more applications of sandwich-assay formats



Interferences can be classified due to their biochemical reasons and impact on assay performance.

1 Interference caused by antibodies from patient samples

e.g. HAMA (human anti-mouse antibodies), HAAA (human anti-animal antibodies), heterophilic antibodies and rheumatoid factors from patient samples

2 Interference caused by endogenous components of the sample

e.g. albumins, complement, lysozyme, fibrinogen, α -1 Antitrypsin, atypically high lipid-, salt- or sugar concentrations as well as atypical viscosities

3 Interference caused by assay components

Assay components - like fluorescent or enzymatic labels - can cross-react with substances from the sample or change binding properties of the assay antibodies

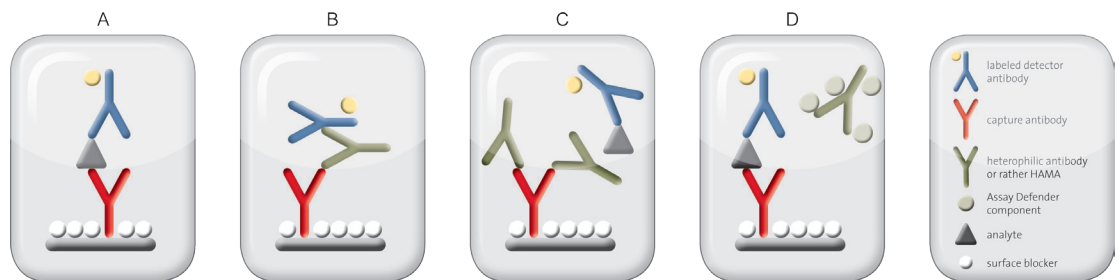


Fig. A: Normal sandwich assay with no interference → correct result

Fig. B: An interfering antibody forms a bridge between capture and detection antibody → false positive result

Fig. C: Binding of the interfering antibodies to the capture antibody → false negative result

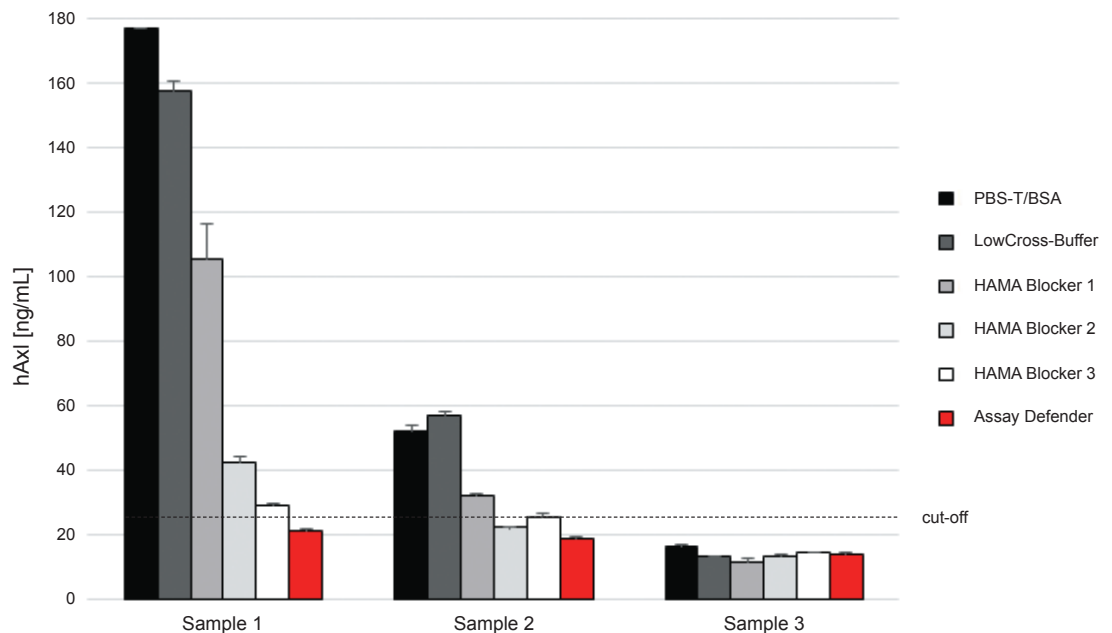
Fig. D: Components of Assay Defender® prevent binding of the interfering antibody → correct result

Assay Defender® enables effective elimination of all kinds of interference and helps to prevent false positive or false negative results.

Use of Assay Defender®

Assay Defender® can be used for immunoassays using capture and/or detection antibodies. It is particularly suitable for human or animal specimens containing HAMA (human anti-mouse antibodies) or other AAA (anti-animal antibodies).

Assay Defender® is a ready-to-use dilution buffer for human or animal body fluid specimens. The previously used dilution buffer can be easily replaced by Assay Defender®. Calibrators must also be diluted in Assay Defender®. Dilution in Assay Defender® can be 1:2 or higher. A useful dilution factor for most applications is 1:10 (1 part specimen + 9 parts Assay Defender®).



Assay Defender® excels at preventing false positive results in interference samples

Serum samples from patients with rheumatoid illnesses (Sample 1 and 2) were analyzed using an established research ELISA for the detection of hAxI, a biomarker for hepatocellular carcinoma. Sample 3 is an interference-free sample from a healthy donor. Samples were diluted either in pure PBS-T/BSA, PBS-T/BSA supplemented with a commercially available HAMA Blocker (HAMA Blocker 3), commercially available ready-to-use HAMA blocking diluents (HAMA Blocker 1 and HAMA Blocker 2), or CANDOR's Assay Defender®. Assay Defender® alone can completely eliminate interferences and hence give a true negative result (< 25 ng/mL) in both interference samples. The results of interference free samples are not affected by Assay Defender®.

order numbers

Assay Defender®	50 mL	180 050
Assay Defender®	125 mL	180 125
Assay Defender®	500 mL	180 500

Bulk quantities available on request for kit manufacturers