

Anti-Drug Antibody (ADA) Bridging ELISA

ADA - Adalimumab

For use with anti-adalimumab monoclonal antibody products HCA203, HCA204, HCA205

This method provides a procedure for generating an ADA ELISA standard curve with anti-adalimumab antibodies, product codes HCA203, HCA204 and HCA205. The method should always be used in conjunction with the product and batch specific information provided with each vial (see product datasheets). This protocol will need to be adjusted for use with different detection methods and immunoassay technology platforms.

Reagents

- BSA
- HISPEC immunoassay diluent (BUF049)
- Human Serum (Sigma-Aldrich, H4522)
- Lynx Rapid HRP Antibody Conjugation Kit[®] (LNK001P-LNK006P)

For best results when conjugating with Lynx Rapid HRP Antibody Conjugation Kit, avoid using antibody with thiomersal as preservative. Contact us to discuss thiomersal-free options.

- PBS
 - 136 mM NaCl
 - 2.68 mM KCl
 - 8.1 mM Na₂HPO₄
 - 1.46 mM KH₂PO₄
- PBST
 - PBS with 0.05% Tween[®]-20
- QuantaBlu[™] fluorogenic peroxidase substrate (Thermo Fisher Scientific, 15169)

Materials

- 384-well microtiter plate, black, square flat-bottom wells, MaxiSorp[™] PS (Thermo Fisher Scientific, 460518)
- Fluorescence plate reader

96-well plates can be used instead of 384-well plates, e.g. black, flat-bottom MaxiSorp PS (Thermo Fisher Scientific, 437111). For the 96-well format, use 100 µl (instead of 20 µl) of antigen, antibodies or substrate, and 300 µl for the blocking step.

Method

1. Prepare the adalimumab at 1 µg/ml in PBS. Coat the required number of wells of a 384-well microtiter plate with 20 µl per well of the prepared adalimumab, and incubate overnight at 4°C.

2. Wash the microtiter plate five times with PBST.
3. Block the microtiter plate by adding 100 µl 5% BSA in PBST to each well, and then incubate for 1 hour at room temperature (RT).
4. Wash the microtiter plate five times with PBST.
5. For the standard curve, prepare a dilution series of the anti-adalimumab antibody HCA203 (AbD18654_hlgG1), HCA204 (AbD18655_hlgG1) or HCA205 (AbD18664_hlgG1) in 10% human serum in PBST in triplicate. Final concentrations of anti-adalimumab antibody should cover the range from 0.1 ng/ml to 10,000 ng/ml. Include a zero anti-adalimumab concentration as the background value.
6. Add 20 µl of anti-adalimumab antibody dilution per well (in triplicate for each standard recommended) and incubate for 1 hour at RT.
7. Wash the microtiter plate five times with PBST.
8. To each well add 20 µl HRP conjugated adalimumab diluted to 2 µg/ml in HISPEC buffer and incubate for 1 hour at RT.
9. Wash the microtiter plate ten times with PBST.
10. Add 20 µl QuantaBlu to each well and measure the fluorescence after 30 minutes.

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