

Assay Performance Characteristics:

Standard range: 50-0.1 ng/mL
Limit of Detection: 0.39ng/mL
Background: OD<0.08 at 450nm
Coefficient of Determination: R-squared>0.98

References:

1. Renstrom A, Larsson PH, Malmberg P, Bayard C. A new amplified monoclonal rat allergen assay used for evaluation of ventilation improvements in animal rooms. J Allergy Clin Immunol. 1997 Nov;100(5):649-55.
2. Renstrom A, Gordon S, Larsson PH, Tee RD, Newman Taylor AJ, Malmberg P. Comparison of a radioallergosorbent (RAST) inhibition method and a monoclonal enzyme linked immunosorbent assay (ELISA) for aeroallergen measurement. Clin Exp Allergy. 1997 Nov;27(11):1314-21.



A list of frequently asked questions and troubleshooting guide can be found under the 'Support' tab on our web site: www.inbio.com.

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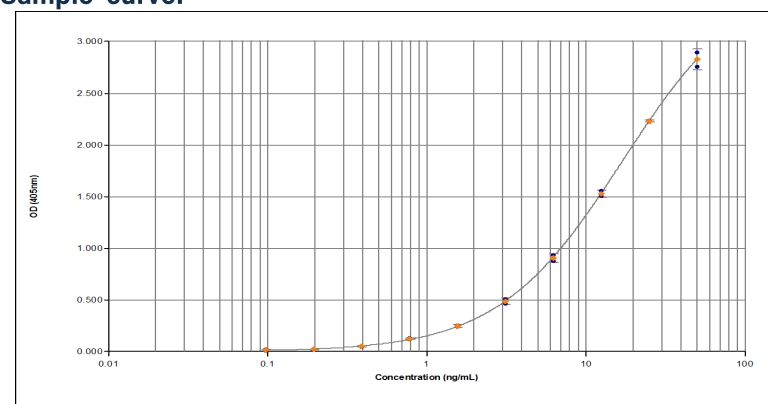
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Rat n 1 ELISA 2.0 Pre-coated Plate Kit

Product Code: EPC-RN1-1
Lot Number: xxxxx

Sample curve:



Contents:

Microtiter plate coated with anti-Rat n 1 monoclonal antibody RUP-6
Rat n 1 allergen standard (white cap)
Biotinylated monoclonal antibody RUP-1 (brown cap)
Streptavidin-peroxidase (blue cap)
Wash buffer (10x concentrate)
Assay buffer (10x concentrate)
TMB developing substrate
Stop solution (0.5N sulfuric acid)

Store kit at 2-8°C
Expiry:

For research and commercial use *in vitro*:
not for human *in vivo* or therapeutic use.

An InBio® product. Made in the USA.

Certificate of Analysis

Pre-coated Plate: 96-well polystyrene microtiter plate coated with monoclonal antibody RUP-6 and treated with stabilizing agent. Sealed in foil pouch with desiccant.

Monoclonal Antibody: RUP-6
Immunogen: Rat n 1
Isotype: Mouse IgG1
Specificity: Binds to an epitope on rat *Rattus norvegicus* urinary allergen, Rat n 1.
Purification: Produced in cell culture and purified by affinity chromatography using Protein G.
Lot Number: xxxxx

Detection Antibody: RUP-1
Immunogen: Rat n 1
Isotype: Mouse IgG1
Specificity: Binds to an epitope rat *Rattus norvegicus* urinary allergen, Rat n 1.
Purification: Produced in cell culture and purified by affinity chromatography using Protein G.
Biotinylation: Biotinylated and titrated for use in ELISA at 1/1,000 dilution.
Lot Number: xxxxx

Allergen Standard: Purified natural Rat n 1 prepared in 1% BSA/50% glycerol/PBS, pH 7.4.

Concentration: 500ng/mL (based on amino acid analysis)
Lot Number: xxxxx

Materials required, but not provided:

- Type I ultrapure water or 18.2MΩ de-ionized water
- Volumetric measuring equipment (e.g. serological pipettes, graduated cylinders)
- Clean containers for buffer and reagent preparation
- Reagent reservoirs
- Calibrated single and multi-channel micropipettes and tips
- Vortex mixer
- Plate reader capable of reading absorbance at 450nm
- Analysis software (recommended, but not required)

Protocol

Please read the entire protocol before starting the assay

Bring all reagents to room temperature before use

1. Prepare a 1x dilution of wash and assay buffers from the 10x concentrates in clean containers using 18.2MΩ de-ionized water or Type I ultrapure water.
For one plate:
Wash buffer: add 15mL concentrate to 135mL water (150mL total volume)
Assay buffer: add 3mL concentrate to 27mL water (30mL total volume)
Adjust volumes accordingly for multi-plate assays. Diluted buffers may be stored at 4°C for up to 1 week.

The example below is for testing 6 samples starting at 1/10 dilution. A multichannel pipet is recommended for mixing and transferring between wells.
• *Highly concentrated samples will require pre-dilution before adding to the plate.*
2. Remove the plate from the foil pouch. Add 150μL wash buffer to each well. Empty the wells by inverting the plate and then tap on absorbent paper to remove residual buffer. Repeat the wash cycle two times.
*Move directly to the next step to prevent the wells from drying.
3. Add 100μL assay buffer to all wells. Add an additional 80μL of assay buffer to wells A1-H1 (the total volume of assay buffer in these wells will be 180μL; all other wells will have 100μL).
4. **Standard:** gently vortex the standard and add 20μL to wells A1 and B1. Mix by pipetting up and down 8-10 times, and then transfer 100μL into wells A2 and B2. Mix and continue the doubling dilution scheme across the plate to wells A10 and B10. Remove and discard 100μL from wells A10 and B10 (100μL will remain).
The assay buffer in wells A11, B11 and A12, B12 will serve as **Blanks**.
Samples: add 20μL of sample to wells C1-H1. Mix by pipetting up and down 8-10 times. Transfer 100μL to wells C2-H2. Continue mixing and transferring to column 12. Remove and discard 100μL from wells C12-H12 (100μL will remain). When finished preparing the plate, the final volume in all wells should be 100μL.
5. Cover the plate and incubate for 1 hour ± 10 minutes at room temperature (20-25°C) away from direct sunlight. **Note:** gentle agitation on a plate shaker during incubations may reduce variability.
6. Gently vortex the biotinylated detection antibody and streptavidin-peroxidase. Prepare a 1:1,000 dilution mix by adding 11μL biotinylated detection antibody and 11μL streptavidin-peroxidase together in 11mL assay buffer in a reagent reservoir.
Mix thoroughly. Wash the plate 3x with 150μL wash buffer per well. Add 100μL of the detection antibody/streptavidin-peroxidase mix to each well.
7. Incubate the plate for 1 hour ± 10 minutes at room temperature (20-25°C) away from direct sunlight.
8. Pour the TMB substrate and stop solution into separate reagent reservoirs so they are ready to use in Step 9. Wash the plate 3x with 150μL wash buffer per well.
9. Use a **multi-channel** pipette to add 100μL TMB to each well and monitor the reaction as the blue color develops. Once OD450 reaches 0.08-0.09 for Standard 1, use a **multi-channel** pipette to add 50μL stop solution to each well (the color will change to yellow).