

## Natural Der f 1 Molecular Reference Standard

**Product Code: MRS-NDF1**

The Natural Der f 1 MRS is intended to serve as reference standard to determine the Der f 1 content of allergen preparations from house dust mite (*Dermatophagoides farinae*) by immunoassay.

Allergen: Natural Der f 1 (*Dermatophagoides farinae* allergen 1)

Lot No: xxxxx

Source: *D. farinae* culture

Mol. Wt: 24 kD

Purification: From spent mite culture by multi-step affinity chromatography.

Composition: 10µg natural Der f 1, determined by Amino Acid Analysis, freeze dried in sealed glass vial.

SDS-PAGE: See inset. Silver-stained SDS-PAGE under non-reducing conditions shows a single band at 24 kD.

ELISA: Immunoreactive in Der f 1 specific ELISA. No trace contamination with Der f 2 was detected by ELISA.

Purity: >95% purity by in-solution LC-MS/MS after tryptic digest.

Formulation: Prior to lyophilization, natural Der f 1 was adjusted to 50 mM volatile ammonium bicarbonate with 3% trehalose.

Storage: Store at -20°C.

Use: **For Research Use Only: Not for Diagnostic or Therapeutic Use**



nDer f 1

The Natural Der f 1 MRS is an Inbio™ product.

# Natural Der f 1 Molecular Reference Standard



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## Reconstitution:

- Allow vial to reach room temperature before use
- Tap vial gently to collect all material at the bottom
- Using a sterile syringe reconstitute the MRS to desired concentration by injecting a suitable volume of a buffer of choice (e.g. PBS, pH 7.4 or 1% BSA/50% glycerol/PBS, pH 7.4).
- Mix by gently swirling the vial until content is completely dissolved.
- Adding 1ml of buffer will result in a Der f 1 concentration of 10,000ng/ml.



## References:

1. Lombardero M et al. Conformational stability of B cell epitopes on Group I and Group II Dermatophagoides spp. allergens. Effect of thermal and chemical denaturation on the binding of murine IgG and human IgE antibodies. J Immunol 1990; 144:1353-1360.
2. Schultz O et al. A sensitive fluorescent assay for measuring the cysteine protease activity of Der p 1, a major allergen from the dust mite Dermatophagoides pteronyssinus. J Clin Pathol: Mol Pathol 1998;51:222-231.
3. Chapman MD et al. The European Union CREATE project: a model for international standardization of allergy diagnostics and vaccines. J Allergy Clin Immunol. 2008;122:882-889.
4. van Ree R et al. The CREATE project: development of certified reference materials for allergenic products and validation of methods for their quantification. Allergy. 2008;63(3):310-26.
5. Kaul S et al. Regulatory environment for allergen-specific immunotherapy. Allergy 2011;66:753-64.
6. Chapman MD and Briza P. Molecular approaches to allergen standardization. Curr Allergy Asthma Rep. 2012;12:478-84.
7. Chapman MD et al. Technological Innovations for High-Throughput Approaches to In Vitro Allergy Diagnosis. Curr Allergy Asthma Rep. 2015;15:36.