

## **Supplemental data**

**Supplemental Table 1.** List of participating laboratories

<b>Name</b>	<b>Laboratory</b>
Cathy van Rooyen	Ampath Laboratory, Pretoria, South Africa
Nicole Rankin	The Doctors Laboratory (TDL), London, UK
Andy Richardson	The Northern General Hospital, Sheffield, UK
Willy de Kruijf	University Medical Centre Utrecht, Utrecht, The Netherlands
Marianne van Hage	Karolinska University Hospital, Stockholm, Sweden
Lars K. Poulsen	Laboratory of Medical Allergology, Allergy Clinic. Copenhagen University Hospital at Gentofte, Denmark
Eleonora Savi	Unità operativa Dipartimentale di Allergologia, Ospedale Piacenza, Piacenza
Danilo Villalta	Allergologia e Immunologia Clinica, Presidio Ospedaliero "S. Maria degli Angeli", Pordenone, Italy
Maria Luisa di Martino	Laboratorio Allergologia e Diagnostica HIV, Azienda Ospedaliero Universitaria di Cagliari, Italy
Mario Plebani	Azienda Ospedaliera Padova, U.O.C. Medicina di Laboratorio, Padova, Italy
Giorgio Walter Canonica	Laboratorio di Malattie Respiratorie e Allergologia, Genova, Italy
Patrizia Pignatti	Laboratorio Immunologia, Fondazione Salvatore Maugeri Pavia, IRCCS, Pavia, Italy
Joana Vitte	Hôpital La Conception, Laboratoire d'Immunologie, Marseille, France
Pascale Nicaise	Hôpital Bichat Claude Bernard, Laboratoire Auto-immunité et Hypersensibilités, Paris, France
Moises Labrador-Horillo	Allergy Section; Vall d'Hebron Hospital, Barcelona, Spain
Maria Conceição Galvão Santos	Faculdade de Medicina da Universidade de Lisboa - Clinical Immunology Lab, Lisboa, Portugal
Peter Schmid-Grendelmeier	Dermatologische Klinik, Allergiestation, Zürich, Switzerland
Rene Ziegelmayer	VCC Research Consult GmbH, Vienna, Austria
Thilo Jakob	Labor für Allergiediagnostik, Universitäts-Hautklinik, Freiburg, Germany
Michael Gleich	Labor Schottendorf MVZ GmbH, Augsburg, Germany
Harald Renz	Klinikum für Laboratoriumsmedizin und Pathobiochemie, Molekulare Diagnostik, Marburg, Germany
Petr Panzner	Fakultní nemocnice Plzen, Plzen, The Czech Republic
Vlastimil Král	Zdravotní ustav se sídlem v Ústí nad Labem, Ústí Nad Labem, The Czech Republic

Supplemental Table 2.

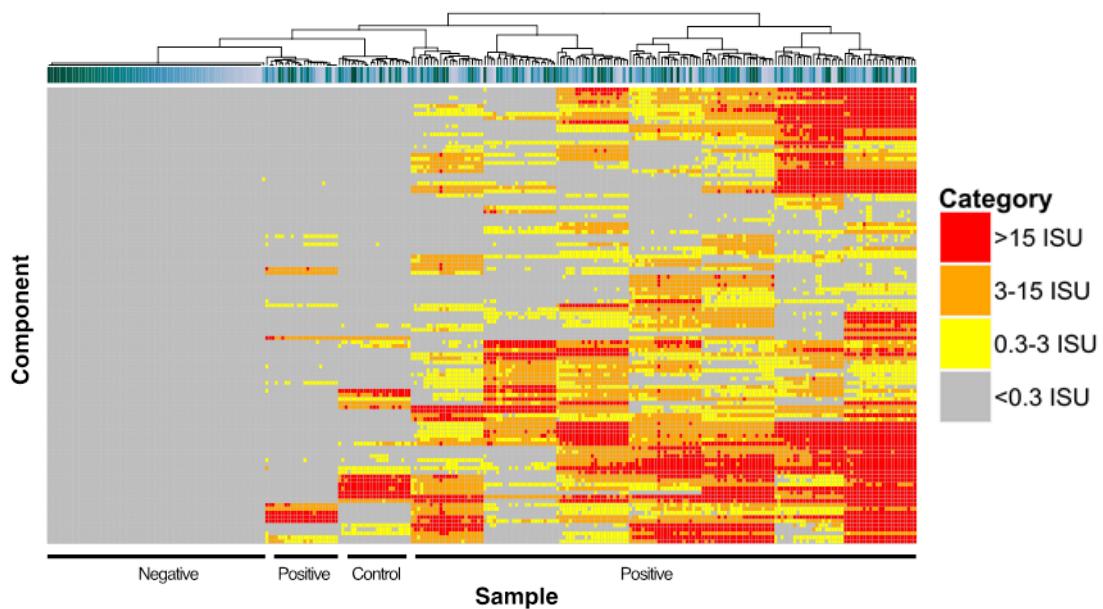
Intra- and inter-assay CV values from the ISAC 112 Directions for Use.

Range (ISU-E)	Intra-assay %CV	Inter-assay %CV	Total %CV
0.3–1	16	21	26.4
1–15	17	21	27
>15	13	11	17

Presented values for each range are mean CV calculated for ISU-E values from tests of representative allergen components using the same lot of reagents. Four plasma samples were assayed in four replicates on 17 different occasions. Each range contained at least 40 sample/allergen component combinations.

Supplemental Figure 1.

Hierarchical clustering of all samples (treated as observations) using all components (treated as variables). The clustering parses data into identifiable cluster groups that correspond perfectly to the samples.



## Supplemental Figure 2.

Confusion matrix displaying the performance of classification using Random forests. The classifier achieved perfect accuracy assigning observations to the correct sample groups based on the samples' sensitization pattern.

