abionic

THE IVD CAPSULE AEROALLERGENS ON THE ABIOSCOPE® IMMEDIATE ALLERGY PROFILE AT THE POINT-OF-CARE

TAKE IMMEDIATE AND ACCURATE TREATMENT DECISIONS

SEMI-QUANTITATIVE RESULTS AT POINT-OF-CARE FROM ONE DROP OF BLOOD

Test simultaneously a panel of respiratory allergens components

Allergic diseases affect over 20% of the population today[1], with nearly 35% of respiratory allergy sufferers experiencing both allergic rhinitis and asthma[2], impairing patients' life at any time of the year.

Standard diagnostic methods such as skin tests are at times impossible or difficult to perform and have limited reliability. Thus, laboratory blood tests are then required to get specific immunoglobulin E (sIgE) levels, extending time to treatment to several days.

A fast and accurate diagnosis is therefore key to relieve symptoms and to guide the best treatment.

This is why Abionic has developed the **IVD CAPSULE Aeroallergens**, a unique and rapid semi-quantitative serological IgE test at the point-of-care, offering pharmacists the unique solution to accurately and immediately identify patients' sensitivity to specific respiratory allergens.

Abionic's aeroallergens panel is easily quantified in 12 minutes from a single drop of blood using the CE marked IVD device, **abioSCOPE®**[3], and contains the main allergens components to help diagnosing allergic asthma.

Abionic's IVD CAPSULE Aeroallergens:

Timothy Grass	House Dust Mite	*Alternaria Alternata*	Cat	Dog
Phl p 1 + Phl p 5	Der p 1 + Der p 2	Alt a 1	Fel d 1	Can f 1

ONE VISIT, IMMEDIATE ALLERGY PROFILE, PERSONALIZED TREATMENT ADVICES

The abioSCOPE® optimises patients' clinical management by enabling pharmacists to immediately provide patients with the best treatment advices right at the point-of-care.

Symptoms → Pharmacy's visit → Abionic's **IVD CAPSULE Aeroallergen** serological assay → **Semi-quantitative sIgE levels** within 12 minutes → Immediate and personalized advices and treatment

IMMEDIATE ALLERGY PROFILE
RIGHT AT THE POINT-OF-CARE

CLINICAL EVIDENCES

Excellent correlation between test results on the abioSCOPE® and a laboratory reference method

94.6% agreement in diagnostic decision was observed between allergy experts who had acccess to the **abioSCOPE®** compared with access to ImmunoCAP™ (Table 1)[4].

Excellent correlation between tests results obtained with the **abioSCOPE®** (whole blood) compared with corresponding plasma measured in a clinical laboratory with the ImmunoCAP™ (Figure 1).

Allergens	n	P	N	D	% agreement
Cat dander	105	36	68	1	99.1
Timothy Grass	105	52	50	3	97.1
Dog Dander	105	10	87	8	92.4
House Dust Mite	105	30	67	8	92.4
Overall					94.6

Table 1. An Allergy Expert panel had access to all patients medical records, with sIgE concentration either from the **abioSCOPE®** or ImmunoCAP (blinded to the method). "n" is the number of patient, "P" is the number of cases where the panel agreed on the presence of allergy, "N" when they agree that the patient was not allergic, and "D" are discordant desicions.

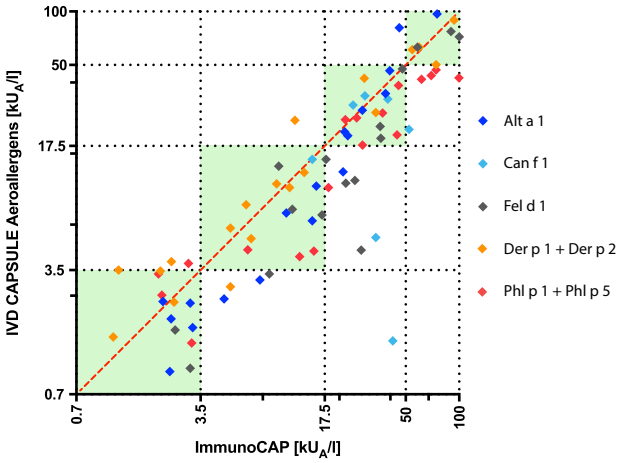


Figure 1. Method comparison: sIgE on the abioSCOPE® (whole blood) versus laboratory gold standard (ImmunoCAP) (plasma). Green scares denote RAST classes agreements.

DISRUPTIVE NANOFLUIDIC TEHNOLOGY

Abionic's patented nanofluidic immunoassay revolutionizes point-of-care diagnostic

Abionic's technology enables fast IgE results with the potential to develop up to 14 specific allergens in a single capsule.

Molecules are forced into a nanochannel, limiting the travel distance to a few hundreds of nanometres and reducing incubation time to 2 minutes[3].

A washing step is not needed as the surface-to-volume ratio is extremely high, and non-specific background is negligible[3].

IgE levels can thus be efficiently measured within an ultra short assay time, with high precision and accuracy on a closed, small, easy-to-operate platform, enabling lab equivalence results at the point of care.

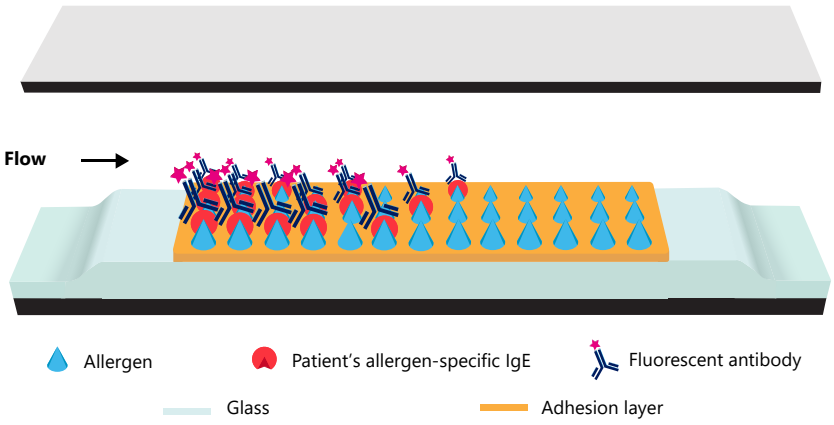


Figure 2. Cross-section through a nanofluidic biosensor

IMMEDIATE ALLERGY PROFILE
RIGHT AT THE POINT-OF-CARE

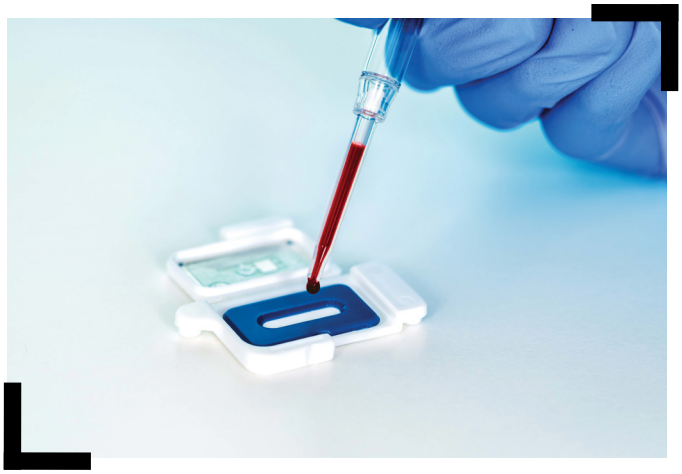
UNIQUE NANOFLUIDIC IMMONUASSAY BASED PLATFORM

The abioSCOPE®: True game changer for the future of diagnostics

Rapid total turnaround time
12 minutes from blood sampling to actionable results

Easy to use
4 simple steps with a blood volume of 50 µl from a finger tip

No maintenance
Contamination-free device, no washing step required



Laboratory quality results
Performances similar to laboratory IgE serologic assays

Full connectivity
HL7 standard (ethernet), USB connexion, barcode reader compatibility

One platform, many tests
Available tests: Ferritin, Pancreatic Stone Protein (PSP)
More tests coming soon

References:

1. de Azevedo M.S.P., Innocentin S., F.A. Dorella F.A.et al. "Immunotherapy of allergic diseases using probiotics or recombinant probiotics" J Appl Microbiol. 2013 Aug;115(2):319-33
2. Stallergenes Annual Report 2018 http://stallergenesgreer.com/sites/default/files/documents/2018_stagr_annual_report.pdf
3. Putallaz L, van den Bogaard P, Laub P, Rebeaud F. "Nanofluidics Drives Point-of-care Technology for on the Spot Protein Marker Analysis with Rapid Actionable Results" Nanomed Nanotechnol. 2019, Vol. 10 Iss. 5 No: 536
4. Roethlisberger S, Karoui O, Mapelli D et al. "Novel Nanofluidic IgE Assay versus a Reference Method: A Real-World Comparison." Int Arch Allergy Immunol. 2019;180(1):28-36

Published by: Abionic SA
Route de la Corniche 5
1066 Epalinges
Switzerland
products@abionic.com

abio_MKT_021_2021_04_EN_V1.0