



ALLERG-O-LIQ

Determination of specific and total IgE in the same test run

Total IgE ALLERG-O-LIQ [REF](#) 08101FL; Specific IgE REAST [REF](#) 0520960FL, [REF](#) 0524800FL, [REF](#) 0529600FL;
Calibration system [REF](#) 07050FL; Allergens [REF](#) Code-FL

Background

Allergen specific IgE is the mediator of immediate hypersensitivity (Type I allergy), which is often accompanied by increased titers of total IgE. Therefore, the quantitative *in-vitro* determination of specific IgE and total IgE represents an important diagnostic tool for patients with suspected Type I allergy. The ALLERG-O-LIQ is based on the "reversed enzyme allerge sorbent test (REAST)" and represents an innovative, flexible and highly accurate test system using anti-human IgE coated microtiter plates in combination with biotinylated reagents (Figure 1). Compared to conventional IgE detection systems all interfering serum components are removed from the system by washing. This leads to the advantage of just measuring allergen-specific IgE and finally to the high sensitivity and specificity of the test.

General features

- CE marked
- User-friendly
- Several hundred single allergens and allergen mixes are available
- Determination of total and specific IgE in the same test run (fully automated system)
- Ready to use reagents (except washing buffer)
- Manual or fully automated system
- Breakapart microtiter strips

Technical information

- "Reversed" ELISA technology
- Incubation time: 3 hours at RT
- Detection System: HRP/TMB (OD_{450 nm} /620 nm)
- 6 point calibration (0.35, 0.7, 3.5, 17.5, 50, 100 IU/mL) according to WHO 75/502
- Wide measuring range (0.35-100 IU/mL) according to RAST classes 0-6 for sIgE and 5-1000 IU/mL for total IgE

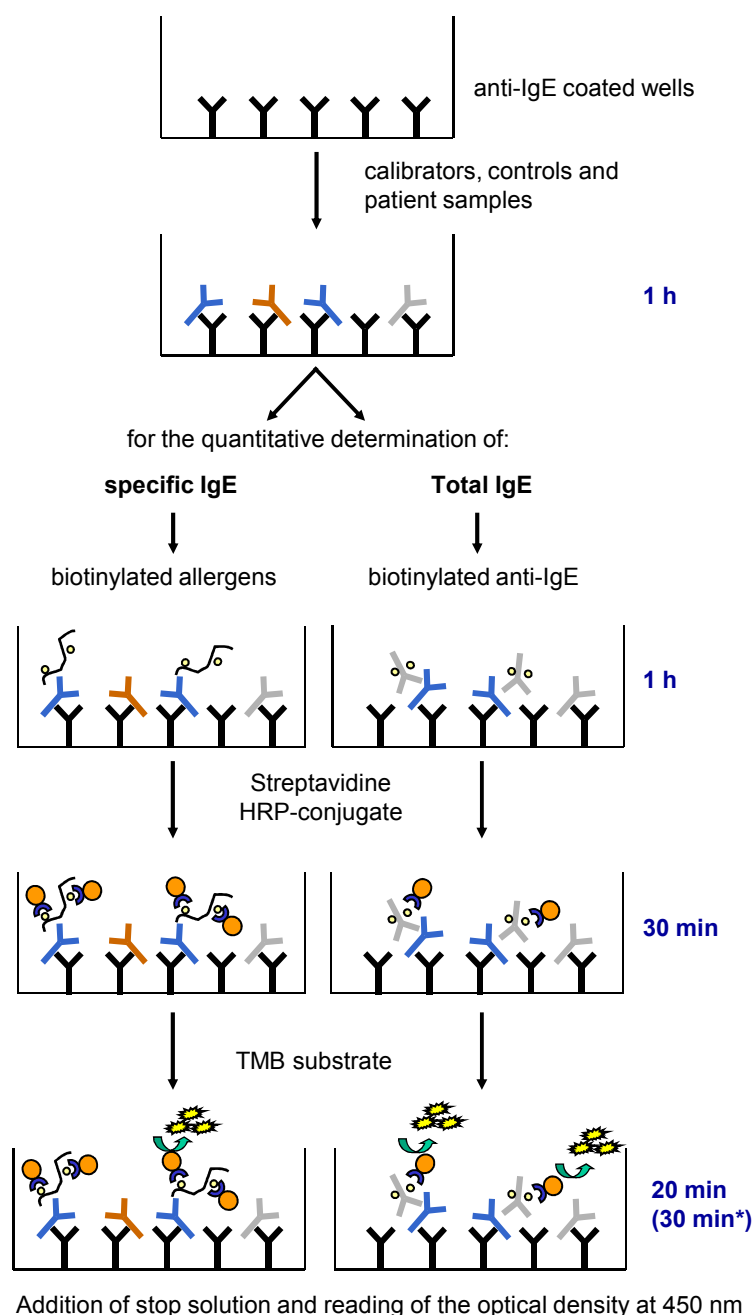


Figure 1
Principle of the ALLERG-O-LIQ
* Incubation time of the substrate for manual procedure is 30 min



allergen source	Code	IgE quantitative [kU/l]		IgE semi-quantitative [class]	
		Spearman's rho	p	concordance [%]	concordance (± 1 class) [%]
birch	t3	0.95	<0.001	69	98
timothy	g6	0.90	<0.001	55	96
mugwort	w6	0.82	<0.001	54	100
<i>D. pteronyssinus</i>	d1	0.85	<0.001	46	92
cat	e1	0.87	<0.001	75	93
dog	e5	0.82	<0.001	52	95
hen's egg	f1	0.84	<0.001	41	86
cow's milk	f2	0.60	<0.001	29	79
wheat	f4	0.60	<0.001	35	72
soybean	f14	0.31	<0.050	25	73
hazelnut	f17	0.68	<0.001	35	90
apple	f49	0.82	<0.001	50	93

(Kleine-Tebbe et al., 2004)

Table 1: Correlation between the ALLERG-O-LIQ and the ImmunoCAP® System

n = 532

Assay performance

- Excellent correlation to patient's history and to the skin prick test (SPT)
- Good correlation to the ImmunoCAP®-System (Phadia)
- Excellent "lot to lot" correlation $R^2 > 0.95$
- Low intra- and inter-assay variation CV% < 8

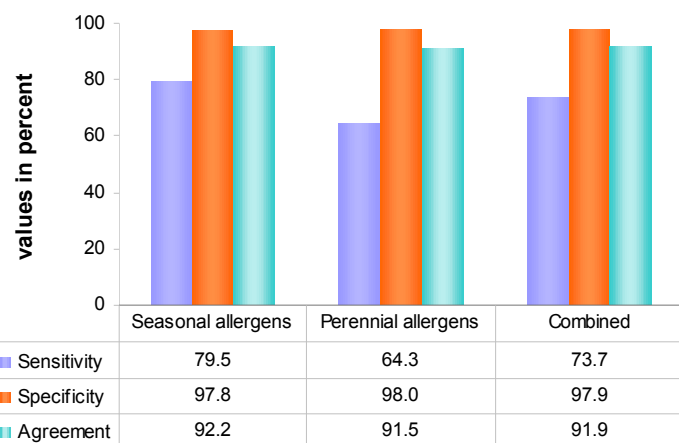


Figure 2

Sensitivity, specificity and agreement of ALLERG-O-LIQ vs. skin prick test (SPT). 149 test persons were tested by SPT and by ALLERG-O-LIQ for reactivity to five seasonal and five perennial allergens. High degree of concordance was obtained between the ALLERG-O-LIQ and SPT.

Classes (ALLERG-O-LIQ)	6				1	2	8	10
	5					3	5	3
	4		1		16	24	8	
	3	1		26	58	27		
	2	13	30	83	28			
	1	27	28	23			1	
	0	52	18	34	2			
		0	1	2	3	4	5	6

(Kleine-Tebbe et al., 2004)

Classes (ImmunoCAP®)

Figure 3

Concordance plot (ALLERG-O-LIQ vs. ImmunoCAP®). Values are given as RAST Classes (0-6).

Literature

1. Kleine-Tebbe J, Breuer K, Lepp U, Vieths S, Worm M, Kunkel G, Wahn U, Lau S: **Allergen-specific IgE-values to inhalants and food allergens: Dr. Fooke ALLERG-O-LIQ versus Pharmacia CAP-System.** *Allergologie* 2004, **27**:129-135.
2. Renz H, Becker WM, Bufe A, Kleine-Tebbe J, Raulf-Heimsoth M, Saloga J, Werfel T, Worm M: **In-vitro-Allergiediagnostik - Positionspapier der Deutschen Gesellschaft für Allergologie und klinische Immunologie (DGAI).** *Allergo J* 2002, **11**:492-506.
3. Mahler M, Lorenz C, Fooke M, Kleine-Tebbe J: **Comparison between skin prick test and reversed enzyme allergo-sorbent test.** 20th World allergy congress, Bangkok, Thailand 2007.
4. Sun B, Mahler M, Mei J, Jing L, Zhong N: **Allergen-specific IgE to inhalant and food allergens and total IgE values in China – Comparison between two commercial immunoassays: Dr. Fooke ALLERG-O-LIQ versus Phadia ImmunoCAP® System.** *J Invest All Clin Immunol* 2008, **18**: 319-321.

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