



## **DIAGNOSTIC AUTOMATION, INC.**

23961 Craftsman Road, Suite E/F, Calabasas, CA 91302

Tel: (818) 591-3030 Fax: (818) 591-8383

onestep@rapidtest.com

technicalsupport@rapidtest.com

www.rapidtest.com



See external label



2°C-8°C



Σ=96 tests



#1805-9

### **Human Allergen Specific IgE ELISA Assay**

Cat. No. 1805-9



#### **Introduction:**

Immediate allergenic reactions in patients are commonly associated with elevated circulating plasma levels of IgE antibodies specific to their corresponding allergens. Common allergens include pollens, molds, yeasts, fungal spores, dust mites, other airborne inhalants, common foods, insect stings and bites, and in rare cases certain drugs and cosmetics. Diagnostic Automation, Inc. Allergen Specific Human IgE test incorporates the use of microwell plastic strips, which have been coated with allergen proteins. Serum or plasma is exposed to the microwell and the bound IgE antibody is detected using an enzyme (HRP) labeled anti-human IgE antibody. The extremely sensitive TMB/Peroxide Substrate is used to detect the levels of enzyme present, which is directly proportional to the level of specific IgE bound to the specific allergen. This general method has been classically termed the RAST method.

We offer over 400 stock allergens, however, we have the capacity to generate or acquire and coat additional allergens upon request. We normally use a twelve well strip format with each well coated with a different allergen. Eight of these strips are organized into a standard microwell frame holder. In other words, eight patients may be tested for 12 allergens per 96 well strip plate. We have the flexibility of offering many types of variations on this same theme based on customer requests. This type of flexibility is required due to the seasonality and variability of allergen prevalence in various parts of the world.

**Intended Use:**

To qualitate and quantitate allergen specific human Immunoglobulin E  
\* Note: Prior to running allergen specific IgE assays, be sure to determine the total IgE of the specimen.

**Principle of Procedure:**

Solid phase capture sandwich ELISA assay using a microwell format.

**Shelf Life:**

The expiration date for the package and each component is stated on the label(s). Store all components at 2 -8 C. Do not freeze all or in part.

**Materials Supplied:**

Allergen coated microwell strips 12x8 with plastic frame - 2

HRP conjugated goat monoclonal anti-human IgE -2 X 12mL

TMB/peroxide substrate color developer II – 30 mL

Sulfuric acid termination reagent (0.5N) –2 X 12mL

15 X Wash buffer concentrate – 60mL

**Limitations of the Procedure:**

No single assay should be used as the only basis for arriving at a diagnostic conclusion.

**Dynamic Range:**

0.35 – 0.70 PRU/mL, depending on the type of allergen used.

**Reproducibility:**

C.V. 6%-10%

**Assay Procedure:**

*\*Caution:* All human fluids should be treated as infectious agents that could carry HIV.

For each specimen, place one strip of allergen coated microwells in the plastic frame and label the corresponding schematic with the patient's names or ID numbers.

1. Bring all reagents to 25°C.
2. Add 100 uL of serum or plasma to each microwell.
3. Incubate for 2 hours at 25°C but not greater than 30°C.
4. Decant and wash five times with previously diluted wash buffer (see “preparation of reagents”). Firmly grip and pound upside down on folded, clean dry paper towels after the last decantation.
5. Add 100uL of monoclonal anti-human IgE HRP conjugated to each well respectively.
6. Incubate for 2 hours as in step 3.

7. Decant and wash as in "step 4".
8. Add 100uL of TMB/peroxide substrate to each well respectively.
9. Incubate for 30 minutes at 25°C but not greater than 30°C.
10. Add 100uL of termination reagent (0.5N sulfuric acid) to each well respectively.
11. Read the optical density (O.D.) at 450 nm using a standard microwell plate reader zeroed on the negative control well.

#### Interpretation of Results:

##### O.D. @450nm

0.000 – 0.250 = Negative

0.251 – 0.350 = Class I

0.351 – 0.450 = Class II

0.451 – 0.550 = Class III

> 0.550 = Class IV

#### Preparation of Reagents:

##### Wash Buffer:

Prior to performing the assay, dilute 1 part of the 15X Wash Buffer concentrate in 14 parts of reagent grade water. Mix thoroughly and dispense into a squeeze wash bottle as needed.

**Allergens Available: (other allergens available upon request)**

#### INHALANT ALLERGENS:

<i>A. alternata</i>	Eastern White Pine	Oat Grass	Yellow Dock
<i>A. vulgaris</i> (Mugwort)	European Filbert	Orchard Grass	Yellow Pine
<i>Abisidia ramosa</i>	English Plantain	Ox-Eye Daisy	
Acacia	English Walnut	<i>P. communis</i>	
<i>Ambrosia psilostarch</i>	Epicoccum	<i>P. pululans</i>	
American Beech	<i>F. oxysporum</i>	Paristaria	
American Elm	Fescue	<i>Penicillium chrysogenum</i>	
American Hazelnut	Fire Ant	<i>Penicillium notatum</i>	
<i>Aspergillus niger</i>	Fleas	<i>Phoma glomerata</i>	
<i>Aspergillus repens</i>	Fuarium	Pigeon Droppings	

Aspergillus <i>terrens</i>	<i>G. candidum</i>	Pigsweed
Aureobasidium <i>pullularia</i>	German Cockroach	Poplar
Bahai Grass	Giant Ragweed	Pyrethrum
Baker's Yeast	Giant Wild Rye	Queen Palm
Bent Grass	Goat Hair	Rabbit Epithelial
Bermuda Grass	Goose Feathers	Ragweed
Birch	Guinea Pig Hair	Rat Epithelial
Black Locust	<i>H. velgare</i> (Barley)	Red Mulberry
Black Oak	Hamster Epithelial	Red Oak
Black Willow	Helminthosporium <i>satiuum</i>	Redtop
Blue Gum	Hickory	Reed's Canary grass
Botrytis	Honey Myrtle	Rhizopus <i>nigricans</i>
Box Elder	Horse Dander	Roughmarsh Elder
Brewers Yeast	House Dust	Russian Thistle
Brome	Human Hair	Rye Grass (perennial)
Brown Cockroach	Italian Cypress	<i>S. aureus</i>
<i>C. Goldenrod</i>	Johnson Grass	Sage Brush
<i>C. hormodendrum</i>	June Grass	Sheep Sorrel
<i>C. lunata</i>	Kapoc	Sheeps Wool
<i>Candida albicans</i>	Kochia	Short Ragweed
Cat Hair	Lamb's Quarters	Smooth Alder
Cattle Hair	<i>M. canis</i> (ringworm)	Spadicoides
Chicken Feathers	Malaleuca	Stemphylium b.
Cladosporium	Meadow Foxtail	Sugar Maple
Cocklebur	Mesquite	Sweet Vernal Grass
Common Reed	Mimosa	Sycamore
Cotton	Mites ( <i>D. farinae</i> )	<i>T. aestivum</i> (wheat pollen)
Cottonwood	Mites ( <i>D. pteronyssinus</i> )	<i>T. canus</i> (gut parasite)
Cultivated Wheat	Mixed Feathers	<i>T. pisiformis</i> (tapeworm)

Curvularia	Mixed Ragweed	<i>T. vulpis</i> (gut parasite)
Curvularia <i>lunata</i>	Mouse Epithelial	Timothy
<i>D. caninum</i> (tapeworm)	Mt. Cedar	<i>Trichoderma veride</i>
<i>D. immitis</i> (heartworm)	<i>Mucor racemosus</i>	<i>Trichophyton mentagrophytes</i>
Dandelion	<i>Mucor mucedo</i>	Trichothecium
Dog Dander	mugwort	Velvet Grass
Dog Hair	Nettle	White Ash
Duck Feathers	Nigrospora	Wormwood

FOOD ALLERGENS:

Alfalfa	Haddock	Tomato
Alfalfa Meal	Honeydew Melon	Tuna
Almond	Kiwi Fruit	Turkey
Apple	Lactalbumin	Vanilla Bean
Atlantic Blue Mussel	Lamb	Venison ( <i>Odecoileus</i> )
Bacon	Lettuce	Walnut
Barley	Liver	Wheat
Bean Sprouts	Lobster	White Bean
Beef	Mango	White Potato
Beet Pulp	Millet	
Black Pepper	Mushroom	
Brewers Yeast	Navy Bean	
Broccoli	Oat	
Buckwheat	Olive	
Cabbage	Onion	
Canola Meal	Orange Pekoe Tea	
Carrot	Orange	

Casein	Parsley
Celery	Pea
Cheddar Cheese	Peaches
Chicken	Peanut
Chocolate	Pear
Clam	Pecan
Cocoa	Pinto Bean
Cod	Pork
Coffee	Poultry
Corn	Raw Sunflower
Corn Gluten Meal	Rice
Cottonseed Meal	Rye
Crab	Salmon
Cultivated Oats	Seaweed
Dry Milk	Scallop
Egg White	Soybean
Egg Whole	Shrimp
Egg Yolk	Strawberry
Fish Meal	Suger Beets
Flaxseed Meal	Sunflower Meal
Flounder	Sweet Potato
Garlic	



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