



**Recombinant allergens for
TYPE I ALLERGIC DISORDERS**

bioallergens 
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Recombinant allergens for TYPE I ALLERGIC DISORDERS



Rekom Biotech also offers **recombinant proteins** for *in vitro* diagnosis of allergies (type I allergic disorders).

A wide variety of protean **allergens** from our environment are proteins coming from food, dust mites, pollens from trees and grasses; and other natural products. These environmental proteins come primarily from non-pathogenic eukaryotic organisms (animals and plants) and are essentially innocuous. However, in some cases, our immune system reacts to them, unintentionally causing damage to our tissues and vital organs that occasionally generates serious systemic pathologies.

The development of **recombinant allergens** provides new opportunities for the improvement of the diagnosis of immunoglobulin E (IgE) mediated allergies, given that they present capacity for binding these antibodies in a comparable way to natural allergens and generally show good reactivity in *in vitro* **diagnostic test**. For this reason, recombinant allergens are of a great interest to both the research field and the development of new diagnostic test for **IgE quantification** in the clinical routine. The measure of circulating IgE antibodies specific for a determined allergen provides information about the patient sensitisation to this allergen. In general, low IgE levels would indicate a low probability of developing a clinical disease, while high IgE levels would show a high correlation of developing disease.

Our recombinant allergens have been evaluated by means of an external study developed by a group of prestigious allergists at the Virgen de la Macarena Hospital in Seville (Spain), using samples from positive and negative patient sera. In these tests, specific IgE has been determined by the skin prick test (SPT) and the UniCAP® test. From these assays, we obtained incidence data for each antigen, which we later compared with that described in the literature, obtaining a very good correlation. Through an adequate diagnostic test incorporating our proteins, it would be possible to determine the allergen to which the patient is reacting and the levels of specific IgE to this allergen. This quantification will allow to predict more accurately the chance of the patient developing an allergy, and thus the need for appropriate treatment.



EUROPEAN WHITE BIRCH (*Betula verrucosa*)

NAME	CAT NUMBER	SOURCE	APPLICATION	DESCRIPTION
Bet v 1	RAL0011	<i>E. coli</i>	WB, DB, IE, DE, CLIA, LF	Pathogenesis-related protein (PR-10)
Bet v 4	RAL0009	<i>E. coli</i>	WB, DB, IE, DE, CLIA, LF	Polcalcin

LONDON PLANE TREE (*Platanus acerifolia*)

NAME	CAT NUMBER	SOURCE	APPLICATION	DESCRIPTION
Pla a 1	RAL0019	<i>P. pastoris</i>	WB, DB, IE, DE, CLIA, LF	Invertase inhibitor
Pla a 3	RAL0021	<i>E. coli</i>	WB, DB, IE, DE, CLIA, LF	Non-specific lipid transfer protein type 1 (LTP)

MUGWORT POLLEN (*Artemisia vulgaris*)

NAME	CAT NUMBER	SOURCE	APPLICATION	DESCRIPTION
Art v 1	RAL0005	<i>P. pastoris</i>	WB, DB, IE, DE, CLIA, LF	Defensin-like protein
Art v 3	RAL0006	<i>E. coli</i>	WB, DB, IE, DE, CLIA, LF	Non-specific lipid transfer protein type 1 (LTP)
	RAL0048	<i>P. pastoris</i>	WB, DB, IE, DE, CLIA, LF	

OLIVE TREE (*Olea europaea*)

NAME	CAT NUMBER	SOURCE	APPLICATION	DESCRIPTION
Ole e 1	RAL0012	<i>P. pastoris</i>	WB, DB, IE, DE, CLIA, LF	Proteins similar to Ole e 1
Ole e 2	RAL0010	<i>E. coli</i>	WB, DB, IE, DE, CLIA, LF	Profilin
Ole e 5	RAL0047	<i>E. coli</i>	WB, DB, IE, DE, CLIA, LF	Superoxide dismutase [Cu-Zn]

PELLITORY-OF-THE-WALL (*Parietaria judaica*)

NAME	CAT NUMBER	SOURCE	APPLICATION	DESCRIPTION
Par j 2	RAL0020	<i>P. pastoris</i>	WB, DB, IE, DE, CLIA, LF	Phospholipid transfer protein (LTP)

RUSSIAN THISTLE (*Salsola kali*)

NAME	CAT NUMBER	SOURCE	APPLICATION	DESCRIPTION
Sal k 1	RAL0018	<i>E. coli</i>	WB, DB, IE, DE, CLIA, LF	Pectin methylesterase

TIMOTHY GRASS POLLEN (*Phleum pratense*)

NAME	CAT NUMBER	SOURCE	APPLICATION	DESCRIPTION
Phl p 1	RAL0001	<i>E. coli</i>	WB, DB, IE, DE, CLIA, LF	Beta-expansin
Phl p 5a	RAL0003	<i>E. coli</i>	WB, DB, IE, DE, CLIA, LF	Unknown Phl p 5a biotinylated
	RAL0003BIOT	<i>E. coli</i>	WB, DB, CE, NP, PO	
Phl p 5b	RAL0017	<i>E. coli</i>	WB, DB, IE, DE, CLIA, LF	Unknown
Phl p 7	RAL0002	<i>E. coli</i>	WB, DB, IE, DE, CLIA, LF	Polcalcin
Phl p 12	RAL0004	<i>E. coli</i>	WB, DB, IE, DE, CLIA, LF	Profilin



ANIMAL

NAME	CAT NUMBER	SOURCE	APPLICATION	DESCRIPTION
Fel d 1	RAL0023	<i>P. pastoris</i>	WB, DB, IE, DE, CLIA, LF	For Cat (<i>Felis domesticus</i>). Uteroglobulin (chain 1)
Can f 1	RAL0016	<i>E. coli</i>	WB, DB, IE, DE, CLIA, LF	For Dog (<i>Canis familiaris</i>). Lipocalin
	RAL0026	<i>P. pastoris</i>	WB, DB, IE, DE, CLIA, LF	
Can f 5	RAL0014	<i>P. pastoris</i>	WB, DB, IE, DE, CLIA, LF	For Dog urine (<i>Canis familiaris</i>). Arginine esterase, prostatic kallikrein
Equ c 1	RAL0007	<i>E. coli</i>	WB, DB, IE, DE, CLIA, LF	For Domestic Horse (<i>Equus caballus</i>). Lipocalin
	RAL0022	<i>P. pastoris</i>	WB, DB, IE, DE, CLIA, LF	

DUST MITES

NAME	CAT NUMBER	SOURCE	APPLICATION	DESCRIPTION
Der f 2	RAL0013	<i>P. pastoris</i>	WB, DB, IE, DE, CLIA, LF	For American house dust mite (<i>Dermatophagoides farinae</i>). NPC2 family
Der p 10	RAL0015	<i>E. coli</i>	WB, DB, IE, DE, CLIA, LF	For European house dust mite (<i>Dermatophagoides pteronyssinus</i>). Tropomyosin
Lep d 2	RAL0008 🏆	<i>P. pastoris</i>	WB, DB, IE, DE, CLIA, LF	For Storage mite (<i>Lepidoglyphus destructor</i>). NPC2 family



FOOD

CEREAL

NAME	CAT NUMBER	SOURCE	APPLICATION	DESCRIPTION
Tri a 19	RAL0053	<i>E. coli</i>	WB, DB, IE, DE	For Wheat (<i>Triticum aestivum</i>). Omega-5 gliadin, seed storage protein
	RAL0053BIOT	<i>E. coli</i>	WB, DB, CE, NP, PO	Tri a 19 biotinylated

FISH

NAME	CAT NUMBER	SOURCE	APPLICATION	DESCRIPTION
Gad c 1	RAL0035	<i>E. coli</i>	WB, DB, IE, DE, CLIA, LF	For Baltic cod (<i>Gadus callarias</i>). Beta-parvalbumin

EGG

NAME	CAT NUMBER	SOURCE	APPLICATION	DESCRIPTION
Gal d 1	RAL0033	<i>P. pastoris</i>	WB, DB, IE, DE, CLIA, LF	For Chicken egg (<i>Gallus domesticus</i>). Ovomucoid

MILK

NAME	CAT NUMBER	SOURCE	APPLICATION	DESCRIPTION
αS1-casein	RAL0027	<i>E. coli</i>	WB, DB, IE, DE, CLIA, LF	For Caw milk (<i>Bos domesticus</i>). Casein, oka. Bos d 9
β-casein	RAL0029	<i>E. coli</i>	WB, DB, IE, DE, CLIA, LF	For Caw milk (<i>Bos domesticus</i>). Casein, oka. Bos d 11
β-lactoglobulin	RAL0032	<i>P. pastoris</i>	WB, DB, IE, DE, CLIA, LF	For Caw milk (<i>Bos domesticus</i>). Beta-lactoglobulin, oka. Bos d 5
α-lactalbumin	RAL0031	<i>E. coli</i>	WB, DB, IE, DE, CLIA, LF	For Caw milk (<i>Bos domesticus</i>). Alpha-lactalbumin, oka. Bos d 4
αS2-casein	RAL0028	<i>E. coli</i>	WB, DB, IE, DE, CLIA, LF	For Caw milk (<i>Bos domesticus</i>). Casein, oka. Bos d 10
κ-casein	RAL0030	<i>E. coli</i>	WB, DB, IE, DE	For Caw milk (<i>Bos domesticus</i>). Casein, oka. Bos d 12

PEANUT, GROUNDNUT

NAME	CAT NUMBER	SOURCE	APPLICATION	DESCRIPTION
Ara h 9	RAL0049	<i>P. pastoris</i>	WB, DB, IE, DE, CLIA, LF	For peanut, groundnut (<i>Arachis hypogaea</i>). Nonspecific lipid-transfer protein type 1
Ara h 2	RAL0040	<i>P. pastoris</i>	WB, DB, IE, DE, CLIA, LF	For peanut, groundnut (<i>Arachis hypogaea</i>). Conglutin (2S albumin)

ROSACEOUS

NAME	CAT NUMBER	SOURCE	APPLICATION	DESCRIPTION
Mal d 3	RAL0039	<i>E. coli</i>	WB, DB, IE, DE, CLIA, LF	For Apple (<i>Malus domestica</i>). Non-specific lipid transfer protein type 1 (nsLTP1)

ALTERNARIA PLANT ROT FUNGUS (*Alternaria alternata*)

NAME	CAT NUMBER	SOURCE	APPLICATION	DESCRIPTION
Alt a 1	RAL0025	<i>P. pastoris</i>	WB, DB, IE, DE, CLIA, LF	Unknown

WB: Western Blot
DB: Dot Blot
IE: Indirect ELISA
DE: positive control in direct ELISA
CLIA: Chemiluminescent Immunoassay
LF: Lateral Flow
CE: Capture ELISA
DAS: Double antigen sandwich
NP: nanoparticles binding
PO: plate orientation

Pack size: 0.1 mg*; 1 mg; bulk
Format: liquid; lyophilised
*under availability



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