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## Rabbit Polyclonal Anti-FEL D1 Major allergen 1 polypeptide chain 1 antibody

Catalog Number: FELD1-101AP

Lot Number:

### General Information

|                                 |   |
|---------------------------------|---|
| <b>Product</b>                  | FEL D1 Major allergen 1 polypeptide chain 1 Antibody Affinity Purified                                    |
| <b>Accession #</b>              | Uniprot: P30440   |
| <b>Verified Applications</b>    | ELISA, IP, WB   |
| <b>Species Cross Reactivity</b> | Cat   |
| <b>Host</b>                     | Rabbit  |
| <b>Immunogen</b>                | Synthetic peptide taken within amino acid region 1-50 on feline Major Cat Allergen I polypeptide chain 1. |
| <b>Alternative Nomenclature</b> | H1, Fel D1, AG4, Allergen Cat-1, Allergen D I-A, Allergen FDI, Allergen Fel Di, Allergen: Fel d 1-A       |

### Physical Properties

|   |   |
|---|---|
| <b>Quantity</b>                           | 100 µg  |
| <b>Volume</b>                             | 200 µl  |
| <b>Form</b>                               | Affinity Purified Immunoglobulins               |
| <b>Immunoglobulin &amp; Concentration</b> | 0.50 mg/ml IgG in antibody stabilization buffer |
| <b>Determinant</b>                        | N-epitope                                       |
| <b>Storage</b>                            | Store at -20°C for long term storage.           |

### Recommended Dilutions

|                            |          |
|----------------------------|----------|
| <b>DOT Blot</b>            | 1:10,000 |
| <b>ELISA</b>               | 1:10,000 |
| <b>Immunoprecipitation</b> | 1:200    |
| <b>Western Blot</b>        | 1:500    |

### Related Products

### Catalog #

|  |              |
|--|--------------|
| <b>BIOTIN-Conjugated</b>                           | FELD1-BIOTIN |
| <b>FITC-Conjugated</b>                             | FELD1-FITC   |
| <b>Antigenic Blocking Peptide</b>                  | P-FELD1      |
| <b>Western Blot Positive Control</b>               | PC-FELD1     |
| <b>Fel D1 allergen 1 chain 1 C-epitope</b>         | FELD1-121AP  |
| <b>Fel D1 Major allergen 1 polypeptide chain 2</b> | FELD1-112AP  |

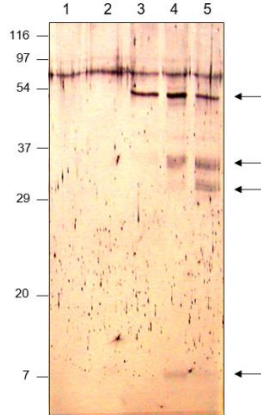
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## Application Verification:



Western Blot of FelD1 Antibody (FELD1-101AP) with:

Control Cat Saliva  
Mutant Cat Saliva  
Mutant Cat Saliva  
Mutant Cat Saliva

1:500 primary antibody dilution in DiluOBuffer.  
Each lane has 40  $\mu$ l of saliva extract.  
SDS-PAGE on 14% gel.

Dilutions are for reference only. Applications not listed above are not necessarily precluded from working with this antibody. Investigators intending to use an application that has not been verified can request a complimentary sample.

## Overview:

A number of house pet bourn allergens have been studied for allergic reactions in general population. Domestic cat (*Felis domestica*) is an important source of indoor allergen Fel D1 that affects a large population. Fel D1 is also established to cause cat-induced asthma in sensitive patients. The levels of Fel D1 and Can F1 were high in homes of former pet-owners compared to the homes without pets. Children with mild allergy to animal dander may have profound increase in bronchial sensitivity (increased sputum eosinophil peroxidase (EPO) and myeloperoxidase (MPO) activity as a result of constant exposure of animal allergens (Fel D1 and Can F1) at public places. Allergic reactions to Fel D1 are effectively reduced by conventional immunotherapy in many patients, but this type of immunotherapy has severe reactions, including anaphylaxis and requires several years of injections for successful desensitization. Several strategies have been employed to address these issues including use of cat allergen peptides, chimeric constructs of Fel D1 and Fc portion of human IgEs (1). The synthetic cat allergen peptides lack the tertiary structure of native Fel D1 and possess reduced capacity to bind Fel D1-specific IgE. These peptides when given to patients sensitive to cat allergens showed improvement in pulmonary function and tolerance to cats (1). The exposure of chimeric human-cat fusion protein composed of truncated human IgG1 and the Fel D1. The chimeric protein induces dose dependent inhibition of Fel D1-driven IgE mediated histamine release from cat allergic donors (2).

The allergen is a 38 kDa dimer composed of two 19 kDa subunits. Each 19 kDa subunit comprises two disulfide linked polypeptide chains, a light alpha-chain and a heavy beta-chain containing an N-linked oligosaccharide. The alpha light chain and the heavy beta chain are linked in an anti-parallel configuration. The Fel D1 glycosylation at Asn 33 is of heterogeneous triantennary structure caused by terminal sialic acid and fructose residues attached to beta-galactose residues.

FabGennix has developed anti-Fel D1-selective antibodies against 3 epitopes covering the majority of the protein. The affinity purified mono-specific polyclonal antibodies to FEL D1 strongly labels a 15-18 kDa protein in cat saliva samples examined. FabGennix employs cyclic peptide methodology for generating antibodies, which results in higher titer and specificity. Western blot positive control in ready-to-use SDS-sample buffer (PC-FELD1) and antigenic blocking peptide (P-FELD1) are available. Antibodies can be conjugated with fluorescent probes or other secondary enzymes upon request at extra charge. For a complete listing of all FabGennix antibodies and services, please visit <http://fabgennix.com>.

## References

1. Kristensen AK, et. al., Determination of isoforms, N-linked glycan structure and disulfide bond linkages of the major cat allergen Fel d1 by a mass spectrometric approach. *Biol Chem.* 1997; 378(8):899-908.
2. Maguire P, et. al., The safety and efficacy of ALLERVAX CAT in cat allergic patients. *Clin Immunol.* 1999 Dec;93(3):222-31.

\* For users who may require large amounts of the products listed above, please inquire about bulk material discounts.

This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.