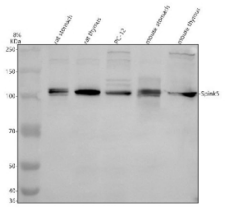
# Spink5 Antibody / Serine protease inhibitor Kazal-type 5 (FY12394)

| Catalog No. | Formulation | Size |
|---|---|---|
| FY12394 | Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml | 100 ug |

**Bulk quote request**

| | |
|---|---|
| **Availability** | 1-2 days |
| **Species Reactivity** | Mouse, Rat |
| **Format** | Lyophilized |
| **Host** | Rabbit |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit IgG |
| **Purity** | Immunogen affinity purified |
| **Buffer** | Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4. |
| **UniProt** | Q5K5D4 |
| **Applications** | Western Blot : 0.25-0.5ug/ml<br>ELISA : 0.1-0.5ug/ml |
| **Limitations** | This Spink5 antibody is available for research use only. |



Western blot analysis of Spink5 using anti-Spink5 antibody. Electrophoresis was performed on a 8% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: rat stomach tissue lysates, Lane 2: rat thymus tissue lysates, Lane 3: rat PC-12 whole cell lysates, Lane 4: mouse stomach tissue lysates, Lane 5: mouse thymus tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-SPINK5 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. Spink5 (~121 kDa predicted) was detected at ~105 kDa, consistent with the partially processed, glycosylated precursor described in keratinocyte and epithelial studies.

## Description

The SPINK5 antibody targets Serine protease inhibitor Kazal-type 5, a secreted protein encoded by the SPINK5 gene

that functions as a multi-domain protease inhibitor. Serine protease inhibitor Kazal-type 5 plays a vital role in maintaining epithelial barrier integrity by regulating protease activity within the skin and mucosal surfaces. The protein contains multiple Kazal-type domains that inhibit trypsin-like and chymotrypsin-like proteases, preventing excessive proteolysis of structural and immune components. The SPINK5 antibody enables detection of this essential regulatory protein in epithelial tissues and supports research into skin biology and inflammatory diseases.

Serine protease inhibitor Kazal-type 5 is most highly expressed in the epidermis, particularly in the granular and cornified layers, where it contributes to desquamation and barrier formation. It inhibits kallikreins such as KLK5, KLK7, and KLK14, which are involved in corneodesmosome degradation. The SPINK5 antibody allows investigation of this balance between protease activation and inhibition, providing insight into how SPINK5 ensures skin homeostasis and prevents barrier dysfunction. Mutations or loss of expression lead to unrestrained proteolytic activity, resulting in the autosomal recessive disorder Netherton syndrome.

Netherton syndrome is characterized by ichthyosiform dermatitis, hair shaft abnormalities, and elevated IgE levels due to defective SPINK5-mediated protease control. The SPINK5 antibody is an important diagnostic and research tool for studying the molecular mechanisms underlying this condition. It enables detection of reduced or absent protein expression in patient tissues, confirming pathogenic variants. Experimental models show that loss of Serine protease inhibitor Kazal-type 5 results in disrupted epidermal differentiation and increased inflammation, underscoring its protective role in barrier maintenance.

Beyond dermatological function, Serine protease inhibitor Kazal-type 5 participates in immune regulation and mucosal defense. It modulates protease activity in airway and gastrointestinal epithelia, influencing inflammation and microbial interactions. The SPINK5 antibody supports analysis of these functions by allowing quantification of protein levels under inflammatory or allergic conditions. Studies suggest SPINK5 expression may also influence asthma and atopic dermatitis susceptibility, linking epithelial protease control to immune homeostasis.

The SPINK5 antibody performs effectively in western blotting, immunohistochemistry, and immunofluorescence, showing strong expression in the upper epidermis and secretory epithelia. NSJ Bioreagents provides this antibody with validated specificity and reproducibility for skin biology and immunology research. By enabling precise detection of Serine protease inhibitor Kazal-type 5, the SPINK5 antibody advances understanding of epidermal barrier regulation, protease inhibition, and inflammatory skin disorders.

## Application Notes

Optimal dilution of the Spink5 antibody should be determined by the researcher.

## Immunogen

E.coli-derived mouse Spink5 recombinant protein (Position: H191-N506) was used as the immunogen for the Spink5 antibody.

## Storage

After reconstitution, the Spink5 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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