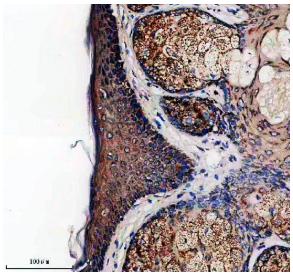
EVPL Antibody / Envoplakin Antibody (FY13617)

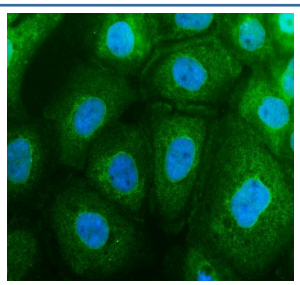
Catalog No.	Formulation	Size
FY13617	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

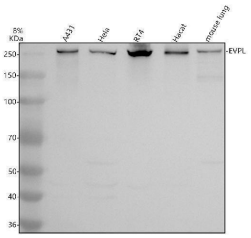
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q92817
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence: 5ug/ml ELISA: 0.1-0.5 ug/ml
Limitations	This EVPL Antibody / Envoplakin Antibody is provided for laboratory research use only.



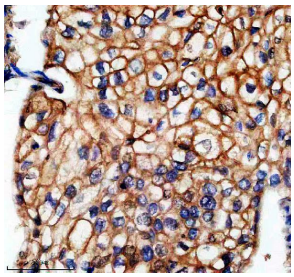
EVPL Antibody by IHC in human skin. Immunohistochemistry of formalin-fixed, paraffin-embedded human skin using Envoplakin Antibody shows prominent brown staining in epidermal keratinocytes, particularly within stratified epithelial layers. Antigen retrieval was performed with EDTA buffer at pH 8.0. Sections were blocked with 10% goat serum and incubated with primary antibody at 2 ug/mL overnight at 4oC. Detection used an HRP-conjugated secondary antibody and DAB chromogen, with hematoxylin counterstaining.



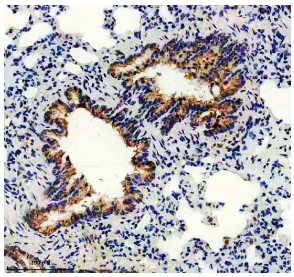
EVPL Antibody by IF in A431 cells. Immunofluorescence staining using Envoplakin Antibody shows green fluorescence predominantly along cell boundaries and within the peripheral cytoplasm, with DAPI-stained nuclei in blue. Cells were treated with enzymatic antigen retrieval reagent for 15 minutes, blocked with 10% goat serum, and incubated with primary antibody at 5 ug/mL overnight at 4oC. Fluoro488-conjugated goat anti-rabbit IgG was applied at 1:500 for 30 minutes before fluorescence microscopy.



EVPL Antibody by WB in human cell lines and mouse lung. Western blot analysis using Envoplakin Antibody detects an immunoreactive band consistent with the expected molecular weight of approximately 232 kDa. Lane assignments: human A431 (lane 1), HeLa (lane 2), RT4 (lane 3), HaCaT (lane 4), and mouse lung (lane 5). Each lane contained 30 ug total protein under reducing conditions, resolved by 8% SDS-PAGE and transferred to nitrocellulose. Membranes were blocked with 5% nonfat milk and incubated with primary antibody at 0.5 ug/mL overnight at 4oC. An HRP-conjugated secondary antibody and chemiluminescent substrate were used for detection.



EVPL Antibody by IHC in human cervical carcinoma. Immunohistochemistry of formalin-fixed, paraffin-embedded human cervical carcinoma using Envoplakin Antibody shows prominent membranous and cytoplasmic brown staining in epithelial tumor cells. Antigen retrieval was performed with EDTA buffer at pH 8.0. Sections were blocked with 10% goat serum and incubated with primary antibody at 2 ug/mL overnight at 4oC. Detection used an HRP-conjugated secondary antibody and DAB chromogen, with hematoxylin counterstaining.



EVPL Antibody by IHC in rat lung. Immunohistochemistry of formalin-fixed, paraffin-embedded rat lung using Envoplakin Antibody shows brown staining in bronchiolar epithelial cells, with less prominent signal in surrounding lung parenchyma. Antigen retrieval was performed with EDTA buffer at pH 8.0. Sections were blocked with 10% goat serum and incubated with primary antibody at 2 ug/mL overnight at 4oC. Detection used an HRP-conjugated secondary antibody and DAB chromogen, with hematoxylin counterstaining.

Description

EVPL Antibody / Envoplakin Antibody recognizes envoplakin, a member of the plakin protein family that contributes to the assembly of the cornified envelope in stratified squamous epithelia. Encoded by EVPL, envoplakin is produced during keratinocyte differentiation, when epidermal cells reorganize their cytoskeleton and construct the resilient outer barrier of the skin. The cornified envelope forms immediately beneath the plasma membrane and becomes an extensively crosslinked protein structure. Its assembly depends on the orderly recruitment and modification of several precursor proteins rather than on a single structural constituent.

Envoplakin forms a functional partnership with periplakin, another plakin-family protein. Together, these proteins participate in early envelope organization and help position structural elements at the cell periphery. As differentiation progresses, transglutaminases catalyze covalent bonds between envelope proteins, producing a durable framework that later becomes associated with specialized epidermal lipids. This combination of protein crosslinking and lipid organization contributes to the skin's resistance to mechanical injury and excessive water loss. Envoplakin's role is therefore best understood as part of a coordinated terminal differentiation program.

The EVPL Antibody recognizes one of the early envelope constituents, a protein whose incorporation precedes the completion of the mature cornified barrier. Plakin proteins share structural features but do not perform identical tasks. Some connect intermediate filaments to junctional complexes, whereas envoplakin is particularly associated with the developing cornified envelope. The spatial and temporal control of these proteins helps explain how keratinocytes shift from flexible, metabolically active cells to the highly specialized corneocytes of the outer epidermis. Disruption of envelope assembly can compromise barrier integrity even when earlier stages of epidermal differentiation appear relatively preserved.

Envoplakin also has a distinctive connection to autoimmunity. It is one of the autoantigens recognized in paraneoplastic pemphigus, a serious mucocutaneous autoimmune disorder associated with underlying neoplasia. Autoimmune

recognition of envoplakin and related proteins reflects the clinical importance of epithelial structural components, although the mechanisms of tissue damage involve more than a single antigen-antibody interaction. The EVPL gene thus links fundamental questions about epithelial differentiation with the molecular basis of acquired barrier disease.

Explore related research targets in our Cell Biology Antibodies collection.

Application Notes

Optimal working dilutions for the EVPL Antibody / Envoplakin Antibody should be established experimentally for each assay.

Immunogen

The EVPL Antibody was generated using e. coli-derived human Envoplakin/EVPL recombinant protein (amino acids E157-K1528).

Storage

Store the reconstituted EVPL Antibody at 4oC for up to one month. For long-term storage, divide into aliquots and keep at -20oC for up to six months. Avoid repeated freeze-thaw cycles.

Alternate Names

EVPL antibody, Envoplakin antibody, EVPK antibody, p210 antibody, EVPL rabbit polyclonal antibody

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