

envoplakin (R-20): sc-16747

BACKGROUND

Paraneoplastic pemphigus (PNP) is an autoimmune blistering disease that is associated with underlying neoplasms. PNP sera react with multiple plakin family proteins, among which only envoplakin and periplakin are constantly detected. Envoplakin, a membrane-associated precursor of the epidermal cornified envelope and desmosomes, is a member of the plakin family of proteins. Envoplakin is expressed in epidermal and esophageal keratinocytes and nonepithelial stratified squamous epithelia, but not in simple epithelia or nonepithelial cells. Envoplakin co-localizes with desmoplakin at desmosomes and on keratin filaments throughout the differentiated layers of the epidermis, but mainly accumulates in nuclear and cytoplasmic aggregates with associated intermediate filaments. The envoplakin rod domain is required for aggregation and the linker domain is required for intermediate filament association. The distribution of envoplakin at the interdesmosomal plasma membrane depends on heterodimerization with periplakin.

REFERENCES

1. Ruhrberg, C., et al. 1996. Envoplakin, a novel precursor of the cornified envelope that has homology to desmoplakin. *J. Cell Biol.* 134: 715-29.
2. Ruhrberg, C., et al. 1996. Chromosomal localization of the human envoplakin gene (EVPL) to the region of the tylosis oesophageal cancer gene (TOCG) on 17q25. *Genomics* 37: 381-385.
3. Chorzelski, T., et al. 1999. Paraneoplastic pemphigus associated with Castleman tumor, myasthenia gravis and bronchiolitis obliterans. *J. Am. Acad. Dermatol.* 41: 393-400.
4. Proby, C., et al. 1999. Human autoantibodies against HD1/plectin in paraneoplastic pemphigus. *J. Invest. Dermatol.* 112: 153-156.
5. Risk, J.M., et al. 1999. Envoplakin, a possible candidate gene for focal NEPPK/esophageal cancer (TOC): the integration of genetic and physical maps of the TOC region on 17q25. *Genomics* 59: 234-242.
6. Maatta, A., et al. 2000. Structure and regulation of the envoplakin gene. *J. Biol. Chem.* 275: 19857-19865.

CHROMOSOMAL LOCATION

Genetic locus: EVPL (human) mapping to 17q25.1.

SOURCE

envoplakin (R-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of envoplakin of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-16747 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

envoplakin (R-20) is recommended for detection of envoplakin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

envoplakin (R-20) is also recommended for detection of envoplakin in additional species, including canine.

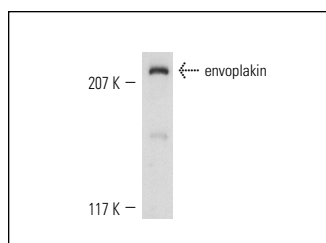
Molecular Weight of envoplakin: 210 kDa.

Positive Controls: MDCK cell lysate: sc-2252 or A-431 whole cell lysate: sc-2201.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/ 2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



envoplakin (R-20): sc-16747. Western blot analysis of envoplakin expression in MDCK whole cell lysate.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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Try **envoplakin (F-4): sc-137033** or **envoplakin (CRENV-1): sc-53276**, our highly recommended monoclonal alternatives to envoplakin (R-20).