Anti-Plectin (N-terminal domain) antibody, mouse monoclonal (PN643)

70-361　　100 μg

Shipping and Storage: Shipped at 4℃ or -20℃ and store at -20℃.

Immunogen: Expressed recombinant His-tagged fusion protein of human plectin, N-terminus (aa 171-595)

Form: 1mg/ml in PBS with 50% glycerol. Filter-sterilized.

Purity: Protein A purified IgG1 κ

Reactivity: N-terminal chain of plectin (Human, bovine, porcine)

Applications:

1.Western blotting: x1/1,000-5,000 (Fig.1)

2. Immunofluorescence microscopy x1/250-500 (Fig.2,3)

Background: Plectin is a giant protein found in nearly all mammalian cells which acts as a link between the three main components of the cytoskeleton: actin microfilaments, microtubules and intermediate filaments. For example, plectin interacts with intermediate filaments, which form networks that provide support and strength to cells. This protein is reported to relate to Epidermolysis Bullosa, Muscular Dystrophy and Pancreatic Ductal Adenocarcinoma. Plectin is encoded by the PLEC gene and known as a protein all around 500 kDa, consisting of >4000 amino acids. The N-terminal domain has been defined to be responsible for binding to actin.

Data Link: UniProtKB: Q15149 (LAMC2_HUMAN), Genbank:U53204

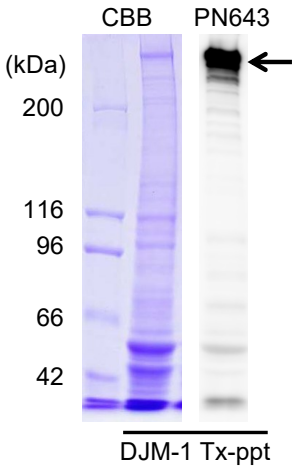

Fig.2 Western blot analysis of PN643 antibody

0.5% Triton-X100 insoluble fraction (Tx-ppt) prepared from DJM-1 cells was stained with CBB and immunoblotted with PN643 antibody at 1:5,000 dilution. The HRP-conjugated goat anti-mouse IgG was used as the second antibody. PN643 antibody detected an approximate 500 kDa band of plectin (arrow). Reacted protein bands were visualized using a chemiluminescent detection with EzWestLumi plus kit (ATTO, Tokyo, Japan).

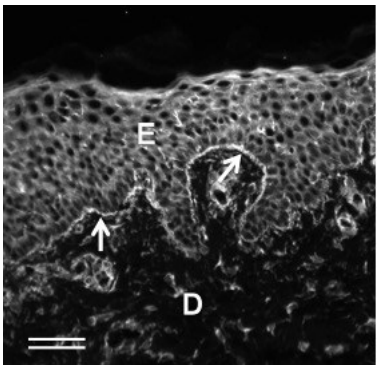

Fig.2 Immunofluorescence microscopy of human skin

A frozen acetone-fixed human skin section was stained with PN643 antibody (1:500 dilution). The FITC-conjugated goat anti-mouse IgG was used as the second antibody. The antibody revealed the location of plectin at the dermal-epidermal junction (arrows). E: epidermis, D: dermis. Bar = 50 μm.

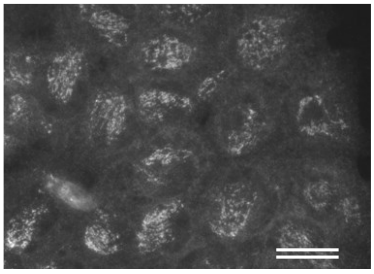

Fig. 3 Immunofluorescence microscopy of cultured FRSK cells

Methanol-fixed FRSK (fetal rat skin keratinocyte) cells were stained with PN643 antibody (1:500 dilution). The FITC-conjugated goat anti-mouse IgG was used as the second antibody. The antibody detected typical dotted patterns of hemidesmosomes. Bar = 20 μm.

Related product: 70-360 Anti-Plectin (C-terminal domain) antibody, mouse monoclonal

Reference:

1. Natsuga K, Nishie W, Shinkuma S, Arita K, Nakamura H, Ohyama M, Osaka H, Kambara T, Hirako Y, and Shimizu H. Plectin Deficiency leads to both muscular dystrophy and pyloric atresia in epidermolysis bullosa simplex. Human Mutation, 31:E1687-E1698, 2010.
2. Natsuga K, Nishie W, Akiyama M, Nakamura H, Shinkuma S, McMillan JR, Nagasaki A, Has C, Ouchi T, Ishiko A, Hirako Y, Owaribe K, Sawamura D, Bruckner-Tuderman L, and Shimizu H. Plectin expression patterns determine two distinct subtypes of epidermolysis bullosa simplex. Human Mutation, 31(3):308-316, 2010.
3. Hirako Y, Yonemoto Y, Yamauchi T, Nishizawa Y, Kawamoto Y, Owaribe K. Isolation of a hemidesmosome-rich fraction from a human squamous cell carcinoma

cell line. Exp. Cell Res., 324:172-182, 2014.