Anti-Pan-Cadherin Antibody [ST54-01]

ET1609-70

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IF-Tissue, IHC-P, IP, IHC-Fr
Molecular Wt:	Predicted band size: 100 kDa
Clone number:	ST54-01

Description: Cadherins comprise a family of Ca2+-dependent adhesion molecules that function to mediate cell-cell binding critical to the maintenance of tissue structure and morphogenesis. The classical cadherins, E-, N- and P-cadherin, consist of large extracellular domains characterized by a series of five homologous NH_2 terminal repeats. The most distal of these cadherins is thought to be responsible for binding specificity, transmembrane domains and carboxy terminal intracellular domains. The relatively short intracellular domains interact with a variety of cytoplasmic proteins, such as -catenin, to regulate cadherin function. Members of this family of adhesion proteins include rat cadherin K (and its human homolog, cadherin, R-cadherin, B-cadherin, E/P cadherin and cadherin-5.

Immunogen: Synthetic peptide within C-terminal human CDH2.

Positive control: A431 cell lysate, MCF7 cell lysate, Mouse embryo tissue lysate, Mouse placenta tissue lysate, Rat embryo tissue lysate, Human heart tissue lysate, Mouse heart tissue lysate, Rat heart tissue lysate, HeLa, Caco-2, NIH/3T3, C6, mouse liver tissue, mouse kidney tissue, mouse heart tissue, rat liver tissue.

Subcellular location: Cell membrane, Cell junction, Endosome, Golgi apparatus.

Database links: SwissProt: P19022 Human | P12830 Human | P22223 Human | P33151 Human | P55283 Human | P39038 Mouse

Recommended Dilutions:

WB	1:1,000
IF-Cell	1:50-1:200
IF-Tissue	1:200
IHC-P	1:50-1:1,000
IP	Use at an assay dependent concentration.
IHC-Fr	1:200

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

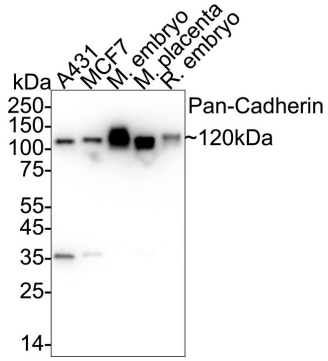

Fig1: Western blot analysis of Pan-Cadherin on different lysates with Rabbit anti-Pan-Cadherin antibody (ET1609-70) at 1/2,000 dilution.

Lane 1: A431 cell lysate (20 µg/Lane)
Lane 2: MCF7 cell lysate (20 µg/Lane)
Lane 3: Mouse embryo tissue lysate (40 µg/Lane)
Lane 4: Mouse placenta tissue lysate (40 µg/Lane)
Lane 5: Rat embryo tissue lysate (40 µg/Lane)

Predicted band size: 100 kDa
Observed band size: 120 kDa

Exposure time: 4 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1609-70) at 1/2,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

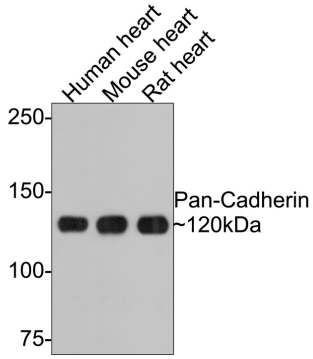

Fig2: Western blot analysis of Pan-Cadherin on different lysates with Rabbit anti-Pan-Cadherin antibody (ET1609-70) at 1/1,000 dilution.

Lane 1: Human heart tissue lysate
Lane 2: Mouse heart tissue lysate
Lane 3: Rat heart tissue lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 100 kDa
Observed band size: 120 kDa

Exposure time: 1 minute;

6% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1609-70) at 1/1,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/300,000 dilution was used for 1 hour at room temperature.

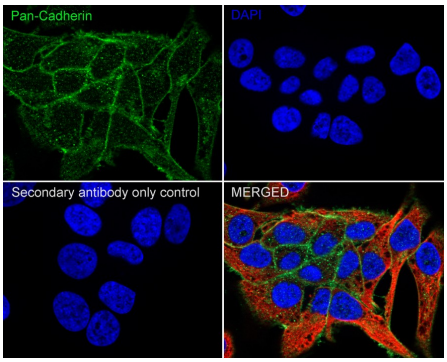

Fig3: Immunocytochemistry analysis of HeLa cells labeling Pan-Cadherin with Rabbit anti-Pan-Cadherin antibody (ET1609-70) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-Pan-Cadherin antibody (ET1609-70) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

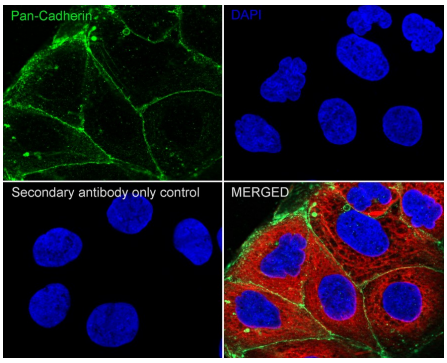

Fig4: Immunocytochemistry analysis of Caco-2 cells labeling Pan-Cadherin with Rabbit anti-Pan-Cadherin antibody (ET1609-70) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-Pan-Cadherin antibody (ET1609-70) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

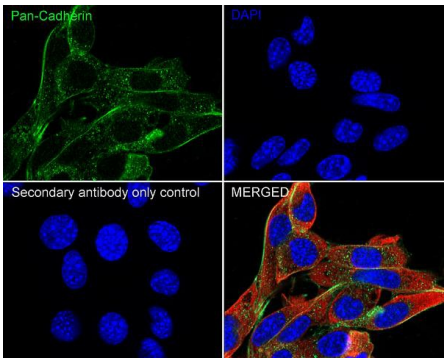

Fig5: Immunocytochemistry analysis of NIH/3T3 cells labeling Pan-Cadherin with Rabbit anti-Pan-Cadherin antibody (ET1609-70) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-Pan-Cadherin antibody (ET1609-70) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI. Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

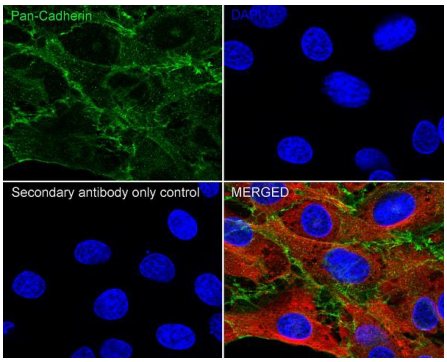

Fig6: Immunocytochemistry analysis of C6 cells labeling Pan-Cadherin with Rabbit anti-Pan-Cadherin antibody (ET1609-70) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-Pan-Cadherin antibody (ET1609-70) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI. Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

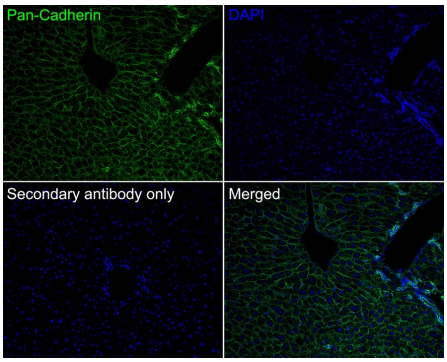

Fig7: Application: IHC-Fr

Species: Mouse

Site: liver

Sample: Frozen section

Antibody concentration: 1/200

Antigen retrieval: Recommend. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for about 2 minutes in microwave oven.

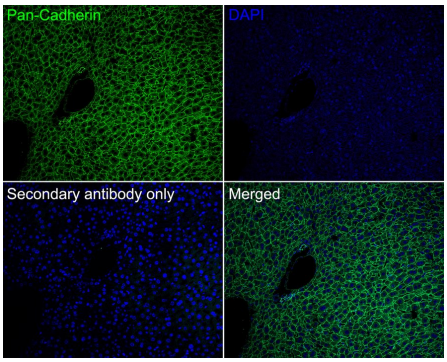

Fig8: Application: IF-Tissue

Species: Mouse

Site: liver

Sample: Paraffin-embedded section

Antibody concentration: 1/200

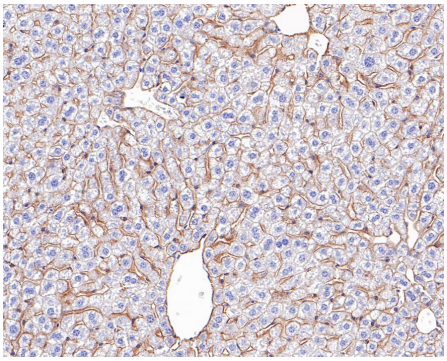

Fig9: Immunohistochemical analysis of paraffin-embedded mouse liver tissue with Rabbit anti-Pan-Cadherin antibody (ET1609-70) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1609-70) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

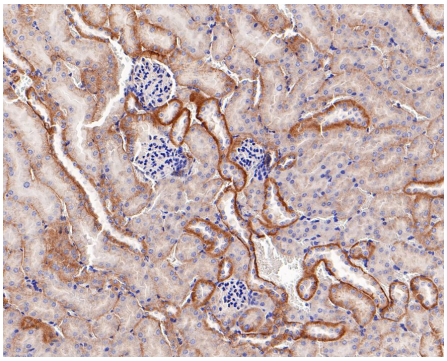

Fig10: Immunohistochemical analysis of paraffin-embedded mouse kidney tissue with Rabbit anti-Pan-Cadherin antibody (ET1609-70) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1609-70) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

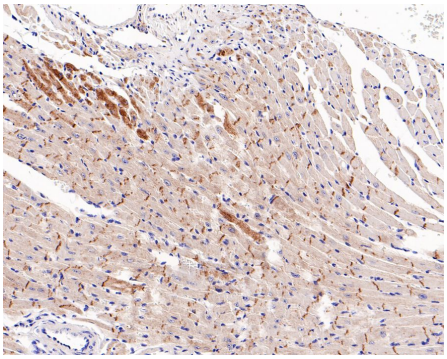

Fig11: Immunohistochemical analysis of paraffin-embedded mouse heart tissue with Rabbit anti-Pan-Cadherin antibody (ET1609-70) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1609-70) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

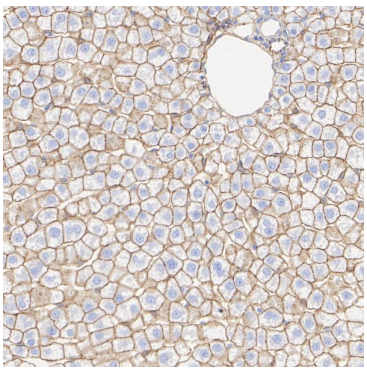

Fig12: Immunohistochemical analysis of paraffin-embedded rat liver tissue with Rabbit anti-Pan-Cadherin antibody (ET1609-70) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1609-70) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

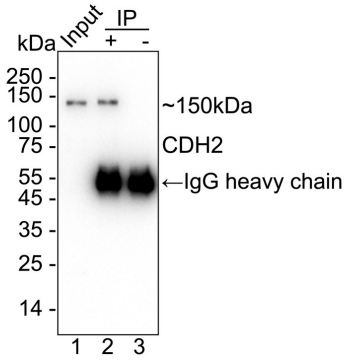

Fig13: Pan-Cadherin was immunoprecipitated from 0.2 mg HeLa cell lysate with ET1609-70 at 2 µg/10 µl beads. Western blot was performed from the immunoprecipitate using ET1609-70 at 1/1000 dilution. HRP Conjugated Goat anti-Rabbit IgG polyclonal Antibody(HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

Lane 1: HeLa cell lysate (input)
Lane 2: ET1609-70 IP in HeLa cell lysate
Lane 3: Rabbbit IgG instead of ET1609-70 in HeLa cell lysate

Blocking/Dilution buffer: 5% NFDM/TBST
Exposure time: 59 seconds; ECL: K1801

Background References

1. Li J et al. Anti-KCNQ1 K+ channel autoantibodies increase IKs current and are associated with QT interval shortening in dilated cardiomyopathy. Cardiovasc Res 98:496-503 (2013).
2. Izumi H & Kaneko Y Evidence of asymmetric cell division and centrosome inheritance in human neuroblastoma cells. Proc Natl Acad Sci U S A 109:18048-53 (2012).