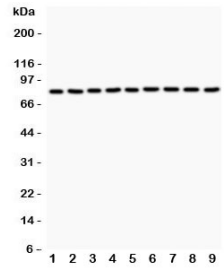
Junction Plakoglobin Antibody / Plakoglobin Polyclonal Antibody (R31599)

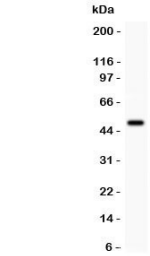
Catalog No.	Formulation	Size
R31599	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

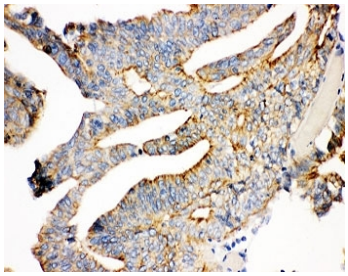
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide
Gene ID	3728
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 0.5-1ug/ml Immunohistochemistry (Frozen): 0.5-1ug/ml Immunocytochemistry: 0.5-1ug/ml Immunofluorescence (FFPE): 2-4ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This Junction Plakoglobin Antibody / Plakoglobin Polyclonal Antibody is available for research use only.



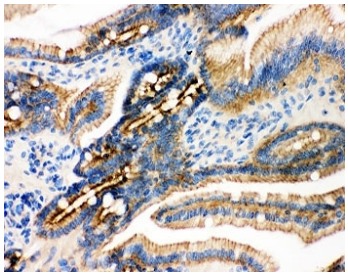
Junction Plakoglobin Antibody Western Blot of Human, Mouse and Rat Samples. Western blot testing of rat brain (lane 1), rat heart (lane 2), rat thymus (lane 3), rat RH35 cells (lane 4), human HeLa cells (lane 5), human COLO-320 cells (lane 6), human HepG2 cells (lane 7), mouse HEPA1-6 cells (lane 8) and human MCF7 cells (lane 9) with Junction Plakoglobin Antibody. A strong, discrete band is detected at approximately 86 kDa across all nine samples, matching the expected molecular weight of plakoglobin. The consistent target band and minimal additional reactivity support cross-species detection with the Plakoglobin Polyclonal Antibody.



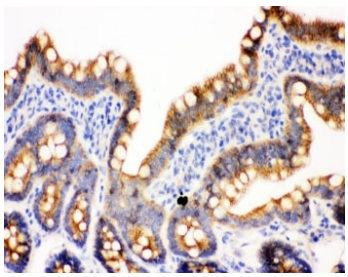
Junction Plakoglobin Antibody Western Blot of Recombinant Human Protein. Western blot testing of recombinant human plakoglobin protein (0.5 ng) with Junction Plakoglobin Antibody. A single prominent immunoreactive band is visible in the tested sample, demonstrating direct recognition of recombinant target protein. This recombinant protein western blot provides an additional assessment of target recognition by the Plakoglobin Polyclonal Antibody.



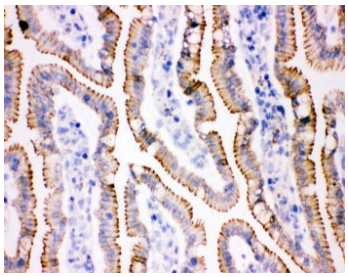
Junction Plakoglobin Antibody in Human Intestine Cancer IHC. Immunohistochemistry staining of FFPE human intestine cancer tissue with Junction Plakoglobin Antibody. HIER was performed by steaming sections in pH 6 citrate buffer for 20 min. Brown staining is prominent along the borders of tumor cells, producing a distinct membranous and junction-associated pattern with comparatively limited nuclear signal. The localization is consistent with plakoglobin at epithelial cell-cell contacts and supports tissue detection with the Plakoglobin Polyclonal Antibody.



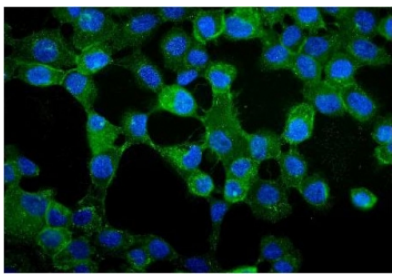
Junction Plakoglobin Antibody in Mouse Intestine IHC. Immunohistochemistry staining of FFPE mouse intestine tissue with Junction Plakoglobin Antibody. HIER was performed by steaming sections in pH 6 citrate buffer for 20 min. Strong brown staining is concentrated along the lateral and apical borders of intestinal epithelial cells, clearly delineating glandular structures while surrounding stromal areas show substantially less signal. This junction-associated epithelial distribution demonstrates mouse tissue detection with the Plakoglobin Polyclonal Antibody.



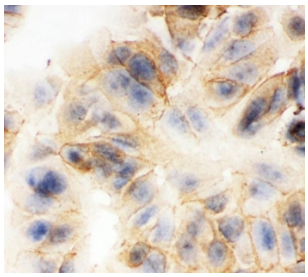
Junction Plakoglobin Antibody in Rat Intestine IHC. Immunohistochemistry staining of FFPE rat intestine tissue with Junction Plakoglobin Antibody. HIER was performed by steaming sections in pH 6 citrate buffer for 20 min. Strong brown staining prominently outlines the intestinal epithelium, with particularly clear labeling along epithelial cell borders and luminal surfaces. The distinct junction-associated pattern demonstrates endogenous plakoglobin localization in rat intestine using the Plakoglobin Polyclonal Antibody.



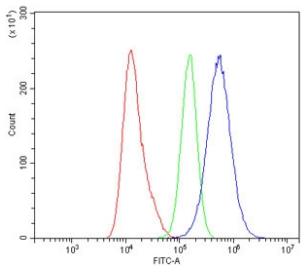
Junction Plakoglobin Antibody in Frozen Rat Intestine IHC. Immunohistochemistry staining of frozen rat intestine tissue with Junction Plakoglobin Antibody. Brown signal is concentrated within the intestinal epithelium and prominently delineates epithelial cell borders throughout the glandular structures. The staining pattern is consistent with the localization of plakoglobin at intercellular junctions and demonstrates detection in frozen tissue using the Plakoglobin Polyclonal Antibody.



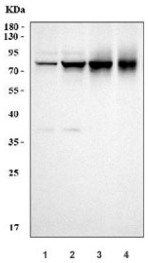
Junction Plakoglobin Antibody in Human A431 Epidermoid Carcinoma Cells IF. Immunofluorescence staining of FFPE human A431 epidermoid carcinoma cells with Junction Plakoglobin Antibody (green) and DAPI nuclear stain (blue). HIER was performed by steaming in pH 6 citrate buffer for 20 min. Green fluorescence is concentrated at cell borders and regions of contact between adjacent cells, while nuclei remain blue. The junction-associated distribution supports cellular localization of plakoglobin with the Plakoglobin Polyclonal Antibody.



Junction Plakoglobin Antibody in Human MCF7 Breast Cancer Cells ICC. Immunocytochemistry staining of FFPE human MCF7 breast cancer cells with Junction Plakoglobin Antibody. HIER was performed by boiling in pH 6 10mM citrate buffer for 20 min followed by cooling before testing. Brown staining is concentrated predominantly along cell borders and at contacts between neighboring cells, producing a junction-associated pattern consistent with plakoglobin localization. This cellular staining supports detection with the Plakoglobin Polyclonal Antibody.



Junction Plakoglobin Antibody in Human A431 Epidermoid Carcinoma Cells FACS. Flow cytometry testing of human A431 epidermoid carcinoma cells with Junction Plakoglobin Antibody at 1 ug/million cells following blocking with goat sera. Cells alone are shown in red, the isotype control in green, and antibody staining in blue. The blue population exhibits a pronounced rightward fluorescence shift relative to both controls, demonstrating detection of endogenous plakoglobin with the Plakoglobin Polyclonal Antibody.



Junction Plakoglobin Antibody Western Blot of Human Cell Lines and Rat Heart. Western blot testing of human 293T cells (lane 1), MCF7 cells (lane 2), T-47D cells (lane 3) and rat heart tissue (lane 4) with Junction Plakoglobin Antibody. A predominant band is detected near the expected molecular weight of approximately 86 kDa in all four samples, with particularly strong signal in T-47D cells and rat heart. Minor lower-molecular-weight reactivity is also visible in some lanes. The predominant target-sized signal further supports detection with the Plakoglobin Polyclonal Antibody.

Description

Junction Plakoglobin Antibody / Plakoglobin Polyclonal Antibody recognizes junction plakoglobin, an armadillo repeat protein encoded by the JUP gene. Commonly called plakoglobin or gamma catenin, this protein is a component of both desmosomes and adherens junctions. These intercellular adhesion structures help maintain tissue architecture by establishing connections between neighboring cells and linking adhesion complexes to cytoskeletal systems. Junction plakoglobin therefore contributes to cellular cohesion, mechanical stability, and the organization of cell-cell contacts.

Plakoglobin contains a central series of armadillo repeats that mediate interactions with multiple junction-associated proteins. Within desmosomes, it associates with desmosomal cadherins and plaque components involved in coupling the junction to intermediate filaments. This structural arrangement allows groups of cells to resist mechanical stress while maintaining tissue integrity. Junction plakoglobin can also participate in adherens junction complexes through interactions with classical cadherins, extending its role beyond desmosomal adhesion.

The architecture of plakoglobin is closely related to that of beta catenin. Both proteins contain armadillo repeat domains and can associate with cadherin-containing complexes, but they differ in their binding partners, localization, and functional contributions. Competition or cooperation between these related proteins can influence the composition of junctional complexes and aspects of intracellular signaling. A Junction Plakoglobin Antibody can therefore help investigate JUP-associated biology independently from other members of the catenin family.

Plakoglobin is particularly important in tissues subjected to repeated mechanical forces, including cardiac muscle and stratified epithelia. Pathogenic variants in JUP can impair junctional integrity and are associated with inherited disorders affecting cardiac and epithelial tissues. Changes in plakoglobin expression or localization have also been investigated in cancer, where disruption of normal cell-cell adhesion and junctional organization may accompany changes in epithelial architecture, migration, and tumor progression.

The terms junction plakoglobin, plakoglobin, JUP, and gamma catenin are all established names for this protein and

reflect its junctional function, gene designation, and relationship to the catenin family. NSJ Bioreagents offers this polyclonal antibody for research into JUP expression, intercellular adhesion, and the molecular organization of desmosomes and adherens junctions.

A Junction Plakoglobin Antibody provides a polyclonal reagent for investigating JUP expression and cell-cell adhesion, while a Plakoglobin Polyclonal Antibody provides commonly used protein terminology for studies of desmosomes, adherens junctions, and junctional organization.

For a monoclonal targeting this junctional protein, see our Plakoglobin Antibody 15F11 / Gamma Catenin Monoclonal Antibody.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the Junction Plakoglobin Antibody / Plakoglobin Polyclonal Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Human partial recombinant protein (AA 556-745) was used as the immunogen for this Junction Plakoglobin Antibody.

Storage

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

Alternate Names

Junction Plakoglobin antibody, Plakoglobin polyclonal antibody, JUP polyclonal antibody, Gamma Catenin polyclonal antibody, gamma-catenin antibody, PKGB antibody, Junctional Plakoglobin antibody

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