OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850
UNITED STATES
Phone: +1-888-267-4436
Fax: +1-301-340-8606
techsupport@origene.com

OriGene Technologies GmbH
Schillerstr. 5
32052 Herford
GERMANY
Phone: +49-5221-34606-0
Fax: +49-5221-34606-11
info-de@origene.com

AP33204SU-N Polyclonal Antibody to Junction plakoglobin (N-term, 5-21) - Serum

Alternate names: CTNNG, Catenin gamma, DP3, Desmoplakin III, Desmoplakin-3, JUP

Quantity: 0.1 ml

Background: Gamma Catenin is a common junctional plaque protein. The membrane-associated plaques are architectural elements in an important strategic position to influence the arrangement and function of both the cytoskeleton and the cells within the tissue. The presence of gamma Catenin in both the desmosomes and in the intermediate junctions suggests that it plays a central role in the structure and function of submembranous plaques. It is a member of the catenin family since it contains a distinct repeating amino acid motif called the armadillo repeat.

Uniprot ID: P14923

NCBI: NP_002221.1

GeneID: 3728

Host: Guinea Pig

Immunogen: Synthetic N-terminus of Human Plakoglobin (aa 5-21), identical to gamma-Catenin

Format: **State:** Liquid prediluted stabilized antiserum
Preservatives: 0.09% Sodium Azide

Applications: **Immunoblotting (Western blot):** 1/2000.
Immunohistochemistry on Frozen Sections: 1/100.
Immunohistochemistry on Paraffin Sections: 1/50 (after microwave treatment).
Cytological Material.
Incubation Time: 1 h at RT extended with paraffin sections.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: Specific detection of Mr 83 000 Plakoglobin, "band 5" polypeptide of intercellular adhering junctions (also described as Gamma-Catenin).
Excellent marker for all forms of intercellular adhering junctions, such as: desmosomes of epithelial and myocardial cells (incl. cultured cells); zonulae and fasciae adherentes of epithelia, endothelia of blood vessels and myocardial cells; adherens-type junctions (e.g. lens tissue, pigmented retinal cells, Sertoli cells of testis).
Especially useful for studying plakoglobin mutations in cardiomyopathies (e.g. ARVC, see References below).

Species Reactivity: **Tested:** Human, Mouse.

Storage: Store undiluted at 2-8°C.
Shelf life: one year from despatch.

General Readings:

1. Saffitz JE. The pathobiology of arrhythmogenic cardiomyopathy. Annu Rev Pathol. 2011;6:299-321. doi: 10.1146/annurev-pathol-011110-130151. PubMed PMID: 21073337.
2. Huang H, Asimaki A, Lo D, McKenna W, Saffitz J. Disparate effects of different mutations in plakoglobin on cell mechanical behavior. Cell Motil Cytoskeleton. 2008 Dec;65(12):964-78. doi: 10.1002/cm.20319. PubMed PMID: 18937352.
3. Kolligs FT, Kolligs B, Hajra KM, Hu G, Tani M, Cho KR, et al. gamma-catenin is regulated by the APC tumor suppressor and its oncogenic activity is distinct from that of beta-catenin. Genes Dev. 2000 Jun 1;14(11):1319-31. PubMed PMID: 10837025.
4. Behrens J. Cadherins and catenins: role in signal transduction and tumor progression. Cancer Metastasis Rev. 1999;18(1):15-30. PubMed PMID: 10505543.
5. Palka HL, Green KJ. Roles of plakoglobin end domains in desmosome assembly. J Cell Sci. 1997 Oct;110 (Pt 19):2359-71. PubMed PMID: 9410875.