

Rabbit Anti-PADI4 antibody

SL0318R

Product Name PADI4

Chinese Name 关节炎相关基因抗体

Alias EC 3.5.3.15; HL 60 PAD; HL-60 PAD; PAD 4; PAD; PADI 4; PADI 5; PADI H protein; PADI5; PDI 4; PDI 5; PDI4; PDI5; Padi4; PADI4_HUMAN; Peptidyl arginine deiminase type IV; Peptidyl arginine deiminase type V; Peptidylarginine deiminase IV; Protein arginine deiminase; Protein-arginine deiminase type IV; Protein-arginine deiminase type-4; Protein arginine deiminase type 4; Protein arginine deiminase type IV.

Research Area immunology Chromatin and nuclear signals Signal transduction The new supersedes the old Epigenetics

Immunogen Species Rabbit

Clonality Polyclonal

React Species Human,
IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 (Paraffin sections need antigen repair)

Applications not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight 74kDa

Cellular localization The nucleus cytoplasmic

Form Liquid

Concentration 1mg/ml

immunogen KLH conjugated synthetic peptide derived from human PADI4: 401-500/663

Lsotype IgG

Purification affinity purified by Protein A

Buffer Solution 1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

Storage Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

Attention This product as supplied is intended for research use only, not for use in human, therapeutic

or diagnostic applications.

PubMed

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PADI4 (peptidyl arginine deiminase, type IV) catalyzes the deimination of arginine residues of proteins. Down-regulates histone H3 and H4 arginine methylation, both by preventing arginine methylation by CARM1 and HRMT1L2/PRMT1 and by converting methylarginine to citrulline. subcellular location at cytoplasmic granules. Belongs to the protein arginine deiminase family. This gene may play a role in granulocyte and macrophage development leading to inflammation and immune response.

Function:

Catalyzes the citrullination/deimination of arginine residues of proteins. Citrullinates histone H3 at 'Arg-8' and/or 'Arg-17' and histone H4 at 'Arg-3', which prevents their methylation by CARM1 and HRMT1L2/PRMT1 and represses transcription. Citrullinates EP300/P300 at 'Arg-2142', which favors its interaction with NCOA2/GRIP1.

Subcellular Location:

Cytoplasm. Nucleus. Cytoplasmic granule. Note=Cytoplasmic granules of eosinophils and neutrophils.

Tissue Specificity:

Expressed in eosinophils and neutrophils, not expressed in peripheral monocytes or lymphocytes.

**Product
Detail**

Post-translational modifications:

Autocitrullination at Arg-372 and Arg-374 inactivates the enzyme.

DISEASE:

Rheumatoid arthritis (RA) [MIM:180300]: An inflammatory disease with autoimmune features and a complex genetic component. It primarily affects the joints and is characterized by inflammatory changes in the synovial membranes and articular structures, widespread fibrinoid degeneration of the collagen fibers in mesenchymal tissues, and by atrophy and rarefaction of bony structures. Note=The gene represented in this entry may be involved in disease pathogenesis. It could play a role in increasing citrullination of proteins in rheumatoid arthritis synovial tissues, leading, in a cytokine-rich milieu, to a break in tolerance to citrullinated peptides processed and presented in the appropriate HLA context.

Similarity:

Belongs to the protein arginine deiminase family.

SWISS:

Q9UM07

Gene ID:

23569

Database links:

[Entrez Gene: 23569](#) Human

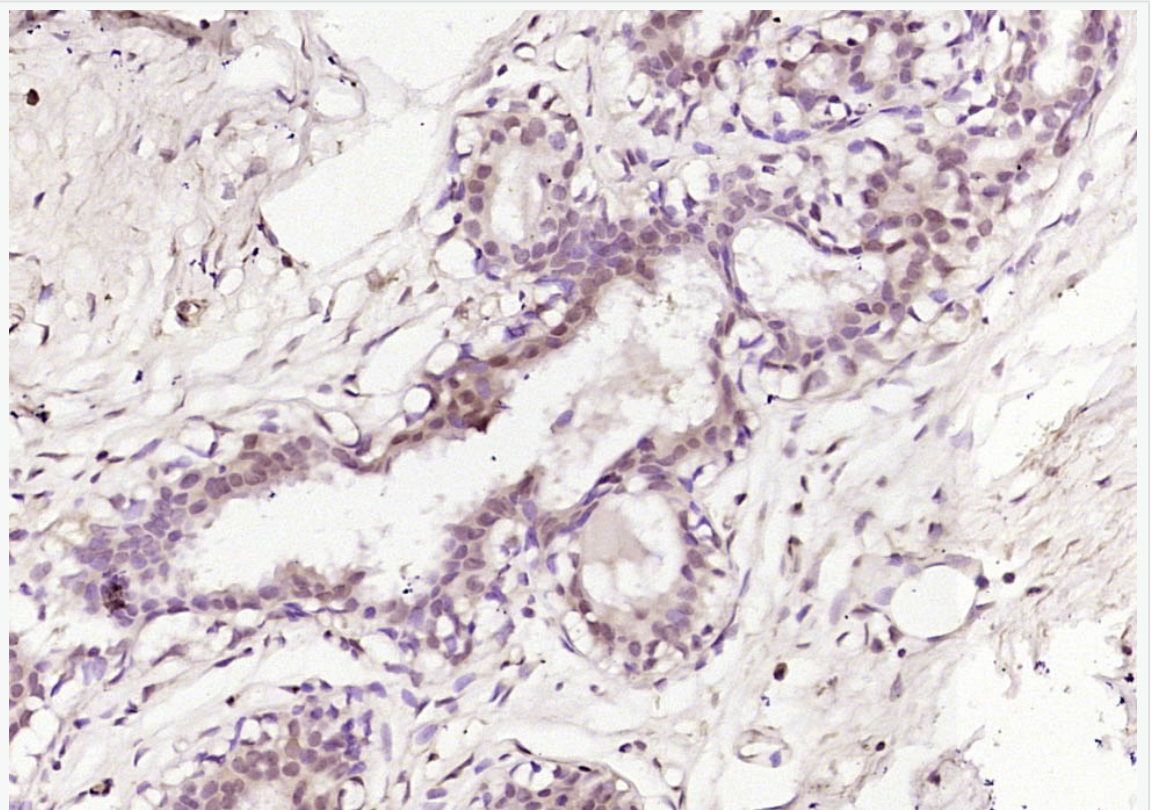
[Omim: 605347](#) Human

[SwissProt: Q9UM07](#) Human

[Unigene: 522969](#) Human

PADI4 或称 PAD4 (Protein-arginine deiminase type IV) 是关节炎相关基因, 分子量为: 74kDa。有学者认为: PADI4 也称IV型肽基精氨酸脱氨酶, 该蛋白与关节炎的发生关系密切。PADI4 基因能够合成一种酶, 将精氨酸变为桔霉素, 当含桔霉素蛋白质的数量超过正常标准后, 人体血液中便会出现攻击含桔霉素的蛋白质的抗体, 这种机理是导致关节炎的重要因素之一。

**Product
Picture**



Paraformaldehyde-fixed, paraffin embedded (human breast); Antigen retrieval by



boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PADI4) Polyclonal Antibody, Unconjugated (SL0318R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.