Anti-Citrullinated collagen type II [ACC4] Standard Size Ab00224-23.0

This chimeric rabbit antibody was made using the variable domain sequences of the original murine IgG1 format, for improved compatibility with existing reagents, assays and techniques.

Isotype and Format: Rabbit IgG, Kappa
Clone Number: ACC4
Alternative Name(s) of Target: ACPA; CII; Col II; COL2A1; citrullinated CII; citrullinated Col II; Col C II; citrullinated proteins; antibodies against citrullinated proteins; Collagen alpha-1(II) chain; Alpha-1 type II collagen; C1 epitope of citrullinated collagen type II as an a-chain peptide
UniProt Accession Number of Target Protein: P02458
Published Application(s): IHC-F, ELISA
Published Species Reactivity: Human, Mouse
Immunogen: The original antibody was generated by immunizing a DBA/1 or (B10.Q ×DBA/1) F1 mouse with calcium-dependent peptidyl arginine deiminase (PAD4) treated helical CII peptides containing T and B cell epitopes emulsified in CFA.
Specificity: This antibody binds the citrullinated C1 epitope (amino acids 359 – 369 : ARGLTGRPGDA) as an α-chain peptide of the collagen type II and also shows binding affinity for the cyclic citrullinated filaggrin peptide. C1 peptide contains two arginines which are post translationally converted to citrulline. ACC4 was found to recognize the first citrulline at position 360. This antibody does not cross react with cross react with the respective non citrullinated variant of the α chain of the C1 epitope.
Application Notes: Antibodies to citrulline-modified proteins have a high diagnostic value in rheumatoid arthritis (RA). The binding specificity of mouse IgG1 version of this antibody towards citrullinated protein was determined through ELISA. This antibody was also used in the immunohistochemical staining of inflamed synovial tissue in the vicinity of cartilage in paw samples obtained from arthritis induced mice. This antibody was also reported to mediate arthritis in mice. ACC4 does not bind cartilage and cannot induce arthritis, but it can enhance the development of arthritis. The antibody is arthritogenic in combination with antibody M2139. Infusion of ACC4 induces collagen antibody-induced arthritis (CAIA) in the presence of the anti-Col II antibody M2139 (PMID: 19204106).
Antibody First Published in: Uysal et al. Structure and pathogenicity of antibodies specific for citrullinated collagen type II in experimental arthritis. J Exp Med. 2009 Feb 16;206(2):449-62

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PMID:19204106

Note on publication: Describes the generation of antibodies against triple helical C1 epitope on collagen type II (CII) which have a high diagnostic value in rheumatoid arthritis (RA).

Product Form

Size: 200 µg Purified antibody.
Purification: Protein A affinity purified
Supplied In: PBS with 0.02% Proclin 300.
Storage Recommendation: Store at 4ºC for up to 3 months. For longer storage, aliquot and store at -20ºC.
Concentration: 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.

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