

PRODUCT INFORMATION

Citrullinated Collagen Type II Monoclonal Antibody (Fc Silent) (Clone ACC1) Item No. 39296

Overview and Properties

Contents:	This vial contains 200 µg of protein A-affinity purified monoclonal antibody
Synonyms:	Alpha-1 Type II Collagen, Collagen Alpha-1(II) Chain
Immunogen:	Bovine collagen type IIA
Cross Reactivity:	(+) Citrullinated form of the triple helical collagen type II C1 epitope (amino acids 359-369), denatured collagen type II, denatured collagen type II triple helical C1 epitope (amino acids 359-369). Some cross reactivity to non-citrullinated epitopes on collagen type II
Species Reactivity:	(+) Human, mouse, bovine; other species not tested
Uniprot No.:	P02458
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 0.02% Proclin™ 300
Concentration:	1 mg/ml
Clone:	ACC1
Host:	Mouse
Isotype:	IgG2a
Applications:	ELISA and immunohistochemistry (IHC); the optimal working concentration/dilution should be determined empirically.

Description

Collagen type II is a fibril-forming heterodimeric protein present in cartilage, cartilaginous zones of tendons, and intervertebral discs that is subject to citrullination by peptidyl arginine deiminase 2 (PAD2) and PAD4.^{1,2} Citrullinated collagen type II and autoantibodies to citrullinated collagen type II have been found in synovial fluid isolated from patients with rheumatoid arthritis, with autoantibodies appearing years prior to clinical disease onset.²⁻⁴ Anti-citrullinated collagen type II antibodies induce proteoglycan depletion of cartilage and arthritis in mice.^{4,5} Cayman's Citrullinated Collagen Type II Monoclonal Antibody (Fc silent) (Clone ACC1) was produced recombinantly from the sequence of the original anti-citrullinated collagen type II monoclonal antibody, ACC1, and contains point mutations that abrogate binding to Fc receptors and abolish antibody effector function. This antibody can be used for ELISA and immunohistochemistry (IHC) applications. The ACC1 antibody was generated by immunizing *Cia5* congenic B10.RIII mice with bovine collagen type II.⁵

References

1. Sorushanova, A., Delgado, L.M., Wu, Z., *et al. Adv. Mater.* **31(1)**, e1801651 (2019).
2. Foulquier, C., Sebbag, M., Clavel, C., *et al. Arthritis Rheum.* **56(11)**, 3541-3553 (2007).
3. Uysal, H., Nandakumar, K.S., Kessel, C., *et al. Immunol. Rev.* **233(1)**, 9-33 (2009).
4. Cho, S.W. and Yoon, H.Y. *J. Biol. Chem.* **274(20)**, 13948-13953 (1999).
5. Uysal, H., Bockermann, R., Nandakumar, K.S., *et al. J. Exp. Med.* **206(2)**, 449-462 (2009).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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