
#10170 Anti-Citrullinated Protein Antibody (E4NG)

- derived from patients with rheumatoid arthritis

Description

Affinity purified mouse monoclonal anti-citrullinated protein antibody (ACPA) clone E4NG in PBS, sterile filtered (0.2 µm). The antibody was originally derived from rheumatoid arthritis (RA) patient, selected by single B cell isolated from RA patient with high reactivity to cyclic citrullinated peptide 2 (CCP2). The antibody is recombinantly expressed in HEK cells as chimeric antibody (human variable domain + mouse constant domain). The antibody recognizes multiple citrullinated proteins/peptides including CCP2, citrullinated collagen type 2 (COL2) peptides, citrullinated human/mouse alpha-enolase (citENO1) etc¹., and potentially other citrullinated proteins/peptides typically manifested in RA, as a citrulline-specific antibody. E4NG has mutation on glycosylation sites in the variable domain, prohibiting expression of the Fab-glycan (no N-glycosylation on variable domain). E4NG has been used in applications including ELISA, multiplex immunoassay, immunohistochemistry and immunoprecipitation etc., and is therefore an ideal antibody for detecting citrullinated antigens. Additionally, *in vivo* and *in vitro* functional analysis also demonstrated that E4NG ACPA could protect against collagen antibody induced arthritis (CAIA) in mice.

Targets with alternative names

Citrullinated epitopes of COL2, Collagen alpha-1(II) chain, COL2A1, type II collagen, CII¹; UniProt: [P28481](#), [P02458](#).
Citrullinated epitopes of ENO1, MPB1¹; UniProt: [P06733](#).

Species reactivity

Mouse, human

Isotype

Mouse IgG2b, κ

Specificity

The antibody widely recognizes citrullinated epitopes of different proteins, tested with CCP, citrullinated COL2 peptides and citrullinated ENO1, but likely with more untested citrullinated antigens.

Concentration

1 mg/ml

Supplied in

PBS

Storage

Centrifuge briefly prior to opening vial. Store at +4°C short term (1-2 weeks). Aliquot and store at -20°C long term. Avoid repeated freeze/thaw cycles.

Recommended dilution

It is recommended the user determines the optimal dilution for their application. The typical starting working dilutions: ELISA 1:500-1:1000, IHC 1:100-1:500.

*For Research Use Only. Not for use in diagnostic procedures.
Not for resale without express authorization.*

References

1. He, Y., Ge, C., Moreno-Giró, À. et al. A subset of antibodies targeting citrullinated proteins confers protection from rheumatoid arthritis. *Nat Commun* 14, 691 (2023). <https://doi.org/10.1038/s41467-023-36257-x>