

Product Name

Monoclonal Mouse anti-Citrullinated Fibrinogen

Immunoglobulin, clone 3D1

CAT No.

MQ13.101-100

LOT No.

13252

Size

100 µg

Edition: January 15, 2020

Intended use

This product is for research use only. NOT for use in diagnostic or therapeutic procedures.

A license from ImmunoPrecise Antibodies (Europe) B.V. is required for use outside the research field.

This product is tested for use in enzyme-linked immunosorbent assay (ELISA), immunoblotting (IB), or Immunohistochemistry (IHC).

Reagent provided

The antibody has been lyophilized in a 10 mM ammonium bicarbonate buffer.

Isotype

Mouse IgG1

Immunogen

Deiminated murine fibrinogen peptide.

Specificity

Specificity has been tested in ELISA (figure 1).

Crossreacts with deiminated human fibrinogen.

Additional tests for cross reactivity have not yet been performed.

Purity

Protein A purified.

Precautions

1. For professional users.
2. As with any product derived from biological sources, proper handling procedures should be used.
3. The product may be used in different techniques and in combination with different sample types and materials, therefore each individual laboratory should validate the applied test system.

Preparation of the antibody

- Recommended antibody concentration: 0.5 mg/ml
- Recommended solvent; PBS or 100mM Tris-HCl, pH 7.0
- Additional sodium azide (up to 0.05%) is recommended for long term storage.
- For a 0.5 mg/ml antibody concentration, dissolve in 200 µl buffer.

NOTE: Be careful opening the vial since the antibody resides in a vacuum.

Storage instructions

For long term storage keep lyophilized batch at -20°C

After dissolving store at 2-8°C. For prolonged storage add sodium azide to 0.05%

Dilution guidelines**ELISA:** 1:2000 – 1:4000.**IB:** 1:100 – 1:500.**IHC:** 1:100 – 1:500.

Other applications: since applications vary, you should determine the optimum working dilution of the product that is appropriate for your specific need.

Relevance

Fibrinogen is a protein produced by the liver which helps stop bleeding by helping blood clots to form.

Fibrinogen gets deiminated (conversion from arginin to citrullin) by Peptidyl Arginine Deiminase (PAD) in inflamed joints in patients that develop rheumatoid arthritis.

Citrulline, while being an amino acid, is not built into proteins during [protein synthesis](#), as it is not coded for by [DNA](#), yet several proteins are known to contain citrulline. Proteins that normally contain citrulline residues include [myelin basic protein](#) (MBP), [filaggrin](#), and several [histone](#) proteins, while other proteins, like [fibrin](#) and [vimentin](#) can get deiminated during cell death and tissue [inflammation](#).

Patients with [rheumatoid arthritis](#) often (at least 80% of them) develop an immune response against proteins containing citrulline. Although the origin of this immune response is not known, detection of antibodies reactive with citrulline containing proteins or peptides is now becoming an important help in the [diagnosis of rheumatoid arthritis](#).

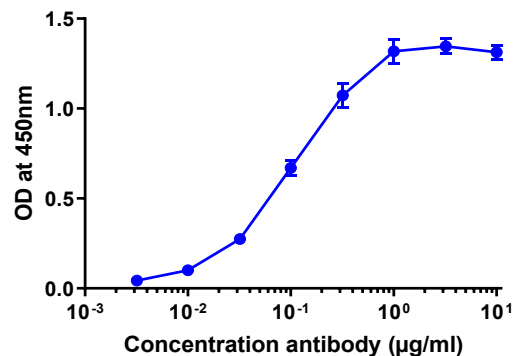
Detection of citrullinated fibrinogen

Figure 1: Specificity of Anti-Deiminated Murine fibrinogen Immunoglobulin, clone 3D1 (MQ13.101), determined by ELISA. Antibody diluted in PBS containing 0.05% tween-20 and 1% BSA was tested on rabbit PAD2 (sigma; cat no P4874) deiminated murine fibrinogen.