Product Name
Monoclonal Mouse
Anti-Citrullinated Fibrinogen Immunoglobulin, clone 3D1

CAT No.
MQ 13.101-100

Size
100 µg

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Intended use
This product is for research use only. NOT for use in diagnostic or therapeutic procedures.
A license from ModiQuest Research 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) and immunoblotting.
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; 100 mM PBS or 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 Deïminase (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.

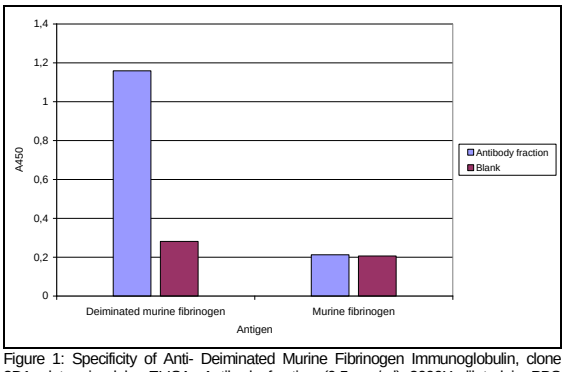

Figure 1: Specificity of Anti- Deiminated Murine Fibrinogen Immunoglobulin, clone 3D1, determined by ELISA. Antibody fraction (0.5 mg/ml) 2000X diluted in PBS containing 0,05% tween-20 and 5% non fat dry milk. Antibody was tested on both rabbit PAD2 (sigma; cat no P4874) deiminated as non deiminated murine fibrinogen.

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