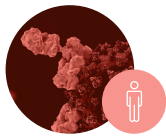


Product datasheet



ATM01

Myeloperoxidase (pANCA) Native Antigen

Antigen overview

Autoantibodies to neutrophil cytoplasmic antigens (ANCA) staining the nuclei or the perinuclear zone of neutrophils by indirect immunofluorescence are referred to as pANCA whereas those giving a clear cytoplasmic fluorescence are referred to as cANCA¹.

The antigen recognised by most pANCA sera has been identified as myeloperoxidase². Autoantibodies to myeloperoxidase are found in the sera of patients with various types of glomerulonephritis and systemic vasculitis^{2,3} including granulomatosis with polyangiitis, Churg-Strauss syndrome, microscopic polyangiitis and polyarteritis nodosa.

Anti-myeloperoxidase antibodies have also been reported in some patients with Wegener's granulomatosis⁴, rheumatoid arthritis⁵ or inflammatory bowel disease⁶.

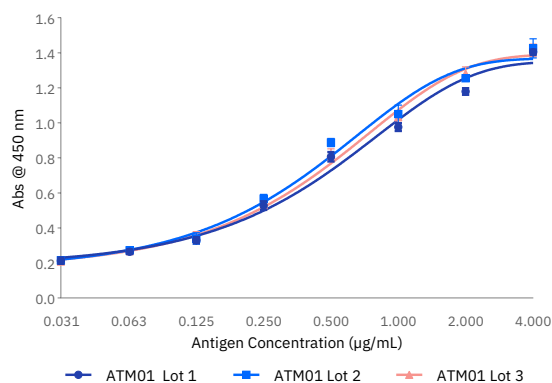
The heme-containing glycoprotein myeloperoxidase is a major constituent of neutrophil azurophilic granules and plays a major role in the oxygen-dependent microbicidal system of these cells.

Storage conditions & handling

- Store at -65°C or below
- Avoid repeated freezing and thawing
- Mix before use and keep on ice

Product profile

Fig 1 AROTEC Myeloperoxidase (pANCA) Antigen Titration



References

1. Kallenberg, A. *et al.* (2007) Autoantibodies 2nd Ed. (Elsevier Acad. Press) 95-103
2. Falk, R.J. & Jennette, J.C. (1988) N. Engl. J. Med. 318, 1651
3. Gou, S.-J. *et al.* (2013) PLoS ONE 8: e60530
4. Falk, R.J. *et al.* (1990) Neth. J. Med. 36, 121-125
5. Cambridge, G. *et al.* (1994) Ann. Rheum. Dis. 53, 24
6. Snook, J.A. (1989) Clin. Exp. Immunol. 76, 30
7. Klebanoff, S.J. (2005) J. Leuk. Biol. 77, 598
8. Falk, R.J. *et al.* (1992) Clin. Exp. Immunol. 89, 274

Product name

Myeloperoxidase (pANCA) antigen

Description

Purified native protein

Source material

Human neutrophils

Purity

>90% pure (by SDS-PAGE)

This enzyme catalyses the oxidation of chloride by hydrogen peroxide to produce the highly reactive reagent hypochlorous acid.

Myeloperoxidase is synthesised as an inactive 90 kDa precursor before it is enzymatically processed into the active form comprising subunits of 57 and 12 kDa (467 and 112 amino acids respectively). When isolated from mature neutrophil granulocytes, myeloperoxidase consists of a tetramer composed of two 57 kDa and two 12 kDa subunits⁷.

Autoantibodies to myeloperoxidase appear to recognise both conformational and linear epitopes^{3,8}.

Ordering information

ATM01-02 - Myeloperoxidase (pANCA) antigen (native) - 0.20 mg

ATM01-10 - Myeloperoxidase (pANCA) antigen (native) - 1.0 mg

Custom vial sizes available on request

Applications

Reactive in Western Blot and ELISA with anti-MPO antibodies or anti-MPO positive patient serum

Fig 2

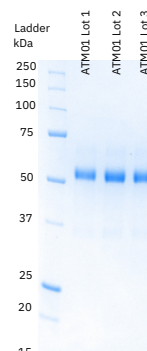


Fig 3

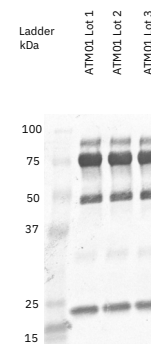


Fig.1. ELISA titration assay of ATM01 Myeloperoxidase (pANCA) antigen using positive patient serum (1:100 dilution)

Fig.2. SDS-PAGE of ATM01 Myeloperoxidase (pANCA) antigen; All lanes loaded with 1 µg protein concentration

Fig.3. Western Blot of ATM01 Myeloperoxidase (pANCA) antigen with positive patient serum (1:1000 dilution)