PRODUCT INFORMATION

MDA-BSA coated plate
Ref: MDAPRUO

1. FIELD OF USE
Malondialdehyde-BSA Coated 96-Well Plates are designed for indirect ELISA-based quantitative determination of immunoglobulins to conjugated Malondialdehyde, in biological liquids.

2. MATERIAL SUPPLIED

<table>
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<th>Item</th>
<th>Amount</th>
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<tbody>
<tr>
<td>96-flat-bottom-clear polystyrene microplate coated with 1586 µg Malondialdehyde conjugated with BSA by direct contact (16 µg/well)</td>
<td>1</td>
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3. GENERAL INSTRUCTIONS
- Plates are activated to 200µl and supplied pre-blocked with Gemac blocking buffer.
- The 96-well plates are supplied ready to use. It is not necessary to rinse the plate prior to add reagents.

4. CAUTIONS FOR USE
- For research use only. Not for use in diagnostic procedures.
- Respect usual handling precautions in laboratory.
- Dispose of waste observing all local, state, provincial or national regulations.

5. STORAGE AND STABILITY
- Plates are packed and sealed in a pouch with desiccant. They are shipped at ambient temperature.
- Upon receipt, store plates between +2 and +8°C in unopened pouches.
- See expiry date on packaging label.

6. BACKGROUND
Malondialdehyde, (Malonic aldehyde, Malonodialdehyde, Malonaldehyde, Malonyldialdehyde or MDA), a one-end product of lipid peroxidation (Draper et al., 1986; Esterbauer et al., 1987), is widely used as a lipid peroxidation indicator and correlates well with the degree of oxidative stress (Srour M. et al., 2000). Furthermore, MDA is able to be covalently linked to proteins, particularly to the ε-amino groups of lysine residues (Haberland et al., 1984; Steinbrecher, 1987). These conjugated-MDA neoantigens lead to (auto)immune responses (Maes et al., 2013). Indeed, the immune system maintains the organism’s integrity and participates in homeostasis. This system responds to all disorders through the activation of specialized cells and through antibody production (Geffard et al., 2010a). Accordingly, the quantification of circulating antibodies to conjugated MDA is an indirect way for revealing lipid peroxidation due to oxidative stress (Maes et al., 2013) and for screening and monitoring the evolution
of diseases (Geffard et al., 2010a). Thus, when compared with controls, higher levels of IgM to conjugated MDA were found in serum of patients 1) with depression and in particular with chronic depression (Maes et al., 2013), 2) with Rheumatoid arthritis (RA) and in particular with extra-articular manifestations (Cvetkovic et al., 2002), 3) with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) (Maes et al., 2006, 2012) and 4) with systemic lupus erythematosus (SLE), scleroderma (SCL) and periarteritis nodosa (PAN) (Amara et al., 1995). Finally, abnormal levels of IgM to conjugated MDA having predictive value* for the evolution of a chronic disease, even in asymptomatic patients (Geffard et al., 2010a, 2010b), the quantitative determination of circulating antibodies to conjugated MDA can be used to assess the effectiveness of treatments (Geffard et al., 2010b).

7. BIBLIOGRAPHIC REFERENCES


Maes M., Kubera M., Mihaylova I., Geffard M., Galecki P., Leunis JC and Berk M. (2013) Increased autoimmune responses against auto-epitopes modified by oxidative and nitrosative damage in
depression: Implications for the pathways to chronic depression and neuroprogression. *Journal of affective disorders, 149*: 23-29
