

IgD immunoglobulins, for Turbidimetry

General information: structure, function ...

Most of the IgD Immunoglobulins are bound to the membrane of circulating B lymphocytes and are the main antigen receptor on the membrane surface, where it is co-expressed with IgM.

Serum IgD represent only about 0.25% of the total immunoglobulins, are monomeric, and have a molecular weight of approximately 185 KDa, a half-life in serum of about 2.8 days and a daily renewal rate of 37 %.

Its concentration in serum is highly variable and does not follow a Gaussian distribution pattern.

Curiously, while most of cellular IgD is of Kappa type, serum IgD is mostly of Lambda type.

IgD can be also found in some other body fluids, such as the colostrum, milk and respiratory mucous.

Although in recent years there has been significant progress in clarifying the role of cellular IgD in the immune system, the role of secreted IgD is still uncertain.

Clinical Significance

The main application of serum IgD measurement is in the diagnosis and monitoring of IgD Monoclonal Gammopathies.

IgD myeloma makes up less than 2% of the total, but is generally very aggressive (with reduced survival), often associated with amyloidosis, with high frequency of renal impairment, severe anaemia and extramedullary involvement

Measurement of IgD level is helpful for follow-up, because usually it is not possible to quantify the monoclonal component by densitometry. It is also helpful in its diagnosis, as an alternative step prior to Immunofixation (IFX), and may prevent an IgD myeloma from being misdiagnosed as a Bence Jones myeloma.

Hyperimmunoglobulinemia D, otherwise known as Hyper IgD Syndrome (HIDS), disease characterized by recurrent febrile episodes and other conditions, is another case where measurement of IgD, in this case polyclonal, is helpful.

Elevation of serum IgD can be seen in chronic infections (such as leprosy, tuberculosis, salmonellosis, infectious hepatitis, and malaria), in recurrent infections by staphylococci, in autoimmune diseases (such as rheumatoid arthritis or systemic lupus), in immunodeficiencies (such as AIDS) and allergic disorders, although the clinical relevance of this increase is not yet clear.

Assay Performances and Characteristics

- ➔ **Turbidimetric Immunoassays (TIA)**, enhanced with polystyrene particles, for their use on Clinical Chemistry automatic analyzers
- ➔ Reagents, prediluted Calibrators and Controls ready-to-use.
- ➔ Standardized to the **British Research Standard for IgD** (code: 67/037) of the *National Institute for Biological Standards and Controls* (a WHO Laboratory for Biological Standards)
- ➔ No Antigen Excess up to more than 10 times the upper assay range.

Catalogue

3diag - IgD - Tia Kit

REF TD-42655

▽ 100 test

EAN/GTIN: 8434477308130

Contains Reagents, Calibrators and Controls

Also available for other analytical platforms. For further information, please contact the Customer Support Service at support@3diag.com