

Introduction to IgD



IgD, one of the immunoglobulins, was first identified in patients with multiple myeloma in 1965. It is low in serum (3-40 $\mu\text{g}/\text{mL}$) and accounts for about 0.25% of the total serum immunoglobulin. IgD is synthesized late in the ontogeny. The hinge region of IgD is long and is sensitive to protease hydrolysis, resulting in a short half-life of only 2.8 days. There are two types of IgD: serotype IgD (sIgD) and membrane-bound IgD (mIgD). It is now believed that sIgD can recognize soluble antigens to promote a protective humoral response, and mIgD constitutes B cell receptor (BCR), which is a sign of B cell development, differentiation and maturity. The discovery of IgD in ancient vertebrates suggests that it has been preserved during the evolution from fish to humans, and performs an important immune function.