



The Power to Question

IgD (H6/31): sc-53081

BACKGROUND

Immunoglobulins are four-chain, Y-shaped, monomeric structures comprised of two identical heavy chains and two identical light chains held together through interchain disulfide bonds. The chains form two domains, the Fab (antigen binding) fragment and the Fc (constant) fragment. Immunoglobulin D (IgD) exists as a monomer with δ heavy chains and either κ or λ light chains. It plays a biological role as a transmembrane receptor molecule, co-expressed with IgM on the surface of mature/naive B cells. In particular, it is found on spleen B cell surfaces. Compared to IgM, IgD exists in much lower numbers and is not expressed on immature B cells. IgD surface expression on B cells is regulated in part by IL-27. In mice, the inhibition of this immunoglobulin isotype does not cause a significant change to the immune system.

REFERENCES

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STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

CHROMOSOMAL LOCATION

Genetic locus: Ighd (mouse) mapping to 12 F1.

SOURCE

IgD (H6/31) is a mouse monoclonal antibody raised against IgD of mouse origin.

PRODUCT

Each vial contains 200 μ g IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IgD (H6/31) is available conjugated to either phycoerythrin (sc-53081 PE) or fluorescein (sc-53081 FITC), 200 μ g/ml, for IF, IHC(P) and FCM.

APPLICATIONS

IgD (H6/31) is recommended for detection of IgD-like molecules in mice with IgB haplotype and high proportion of mature lymphoid cells, particularly on cells from Peyer's patches of mouse and rat origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1 \times 10⁶ cells).

Molecular Weight of IgD heavy (δ) chain: 44-80 kDa.

Molecular Weight of IgD light (κ/λ) chain: 21-25 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

1) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.