

IgD (D-17): sc-34656

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 delta heavy chains and either κ or lambda 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

1. Takayasu, T., et al. 1980. Amino acid sequence and location of the three glycopeptides in the Fc region of human immunoglobulin D. *Biochem. Biophys. Res. Commun.* 97: 635-641.
2. Lin, L.C. and Putnam, F.W. 1981. Primary structure of the Fc region of human immunoglobulin D: implications for evolutionary origin and biological function. *Proc. Natl. Acad. Sci. USA* 78: 504-508.
3. Shinoda, T., et al. 1981. Complete amino acid sequence of the Fc region of a human δ chain. *Proc. Natl. Acad. Sci. USA* 78: 785-789.
4. Putnam, F.W., et al. 1981. Amino acid sequence of the first constant region domain and the hinge region of the δ heavy chain of human IgD. *Proc. Natl. Acad. Sci. USA* 78: 6168-6172.
5. Takayasu, T., et al. 1982. Amino acid sequence of galactosamine-containing glycopeptides in the hinge region of a human immunoglobulin D. *Biochem. Biophys. Res. Commun.* 105: 1066-1071.
6. Naiem, M., et al. 1982. The value of immunohistological screening in the production of monoclonal antibodies. *J. Immunol. Methods* 50: 145-160.

CHROMOSOMAL LOCATION

Genetic locus: IGHD (human) mapping to 14p13.

SOURCE

IgD (D-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of IgD of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-34656 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

IgD (D-17) is recommended for detection of IgD of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

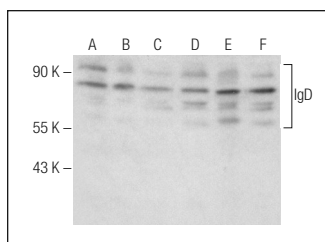
Molecular Weight of IgD light (κ/λ) chain: 21-25 kDa.

Positive Controls: NAMALWA cell lysate: sc-2234, CCRF-CEM cell lysate: sc-2225 or Daudi cell lysate: sc-2415.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



IgD (D-17): sc-34656. Western blot analysis of IgD expression in NAMALWA (A), Raji (B), CCRF-CEM (C), Ramos (D), Daudi (E) and U-698-M (F) whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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

MONOS
Satisfaction
Guaranteed

Try **IgD (IgD26): sc-53345**, our highly recommended monoclonal alternative to IgD (D-17).