

# IgD (E-13): sc-34657

## BACKGROUND

The regions of relatively constant sequence beyond the variable regions of immunoglobulins are termed constant regions (C regions) and are present in both the heavy and light chains. With few exceptions, the sites of attachment for carbohydrates to immunoglobulins are located in the constant region. The constant regions also serve to hold the variable regions on both heavy and light chains together by virtue of the disulfide bond between them. The constant region domains extend the antigen-binding arms of the antibody molecule, thereby facilitating interaction with the antigen and increasing the maximum rotation of these arms. IgD has a biological role as a receptor molecule on the B lymphocyte surface.

## REFERENCES

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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., Takahashi, N., Takayasu, T., Okuyama, T. and Shimizu, A. 1981. Complete amino acid sequence of the Fc region of a human  $\delta$  chain. *Proc. Natl. Acad. Sci. USA* 78: 785-789.
4. Putnam, F.W., Takahashi, N., Tetaert, D., Debuire, B. and Lin, L.C. 1981. Amino acid sequence of the first constant region domain and the hinge region of the  $\delta$  heavy chain of human IgD. *Proc. Natl. Acad. Sci. USA* 78: 6168-6172.
5. Takayasu, T., Suzuki, S., Kametani, F., Takahashi, N., Shinoda, T., Okuyama, T. and Munekata, E. 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., Gerdes, J., Abdulaziz, Z., Sunderland, C., Allington, M., Stein, H. and Mason, D. 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 14q32.33.

## SOURCE

IgD (E-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of IgD of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-34657 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

IgD (E-13) is recommended for detection of IgD of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 ( $\delta$ ) chain: 44-80 kDa.

Molecular Weight of IgD light ( $\kappa/\lambda$ ) chain: 21-25 kDa.

## 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) 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.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **IgD (IgD26): sc-53345**, our highly recommended monoclonal alternative to IgD (E-13).