

# IgD (H-67): sc-99150

## BACKGROUND

IgD chain C (Ig  $\delta$  chain C region) is an allelic product of the human IGHD gene. The two known IGHD alleles, IGHD\*01 and IGHD\*02, respectively produce isoforms 1, a secreted protein, and 2, a single-pass type I membrane protein. A member of the adaptive immune system, IgD antibodies are monomers expressed by activated B cells. Containing 3 Ig-like (immunoglobulin-like) domains, IgD chain C is located on chromosome 14 within the human heavy chain locus, lying on the 3' side of the IgM chain C region from the V-D-J cassette. Polyadenylation at certain sites along the heavy chain locus likely effects the mechanism that determines the alternative splicing event which results in the expression of either IgD chain C or IgM chain C. Some studies have suggested that antigenic co-activation of IgD<sup>+</sup> B cells can have a negative influence on bone resorption during infectious events.

## REFERENCES

1. 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.
2. Shinoda, T., et al. 1981. Complete amino acid sequence of the Fc region of a human Delta chain. Proc. Natl. Acad. Sci. USA 78: 785-789.
3. Bassing, C.H., et al. 2003. T cell receptor (TCR)  $\alpha/\delta$  locus enhancer identity and position are critical for the assembly of TCR  $\delta$  and  $\alpha$  variable region genes. Proc. Natl. Acad. Sci. USA 100: 2598-2603.
4. Baker, P.J., et al. 2009. B cell IgD deletion prevents alveolar bone loss following murine oral infection. Interdiscip. Perspect. Infect. Dis. 2009: 864359.
5. Seifert, M. and Küppers, R. 2009. Molecular footprints of a germinal center derivation of human IgM<sup>+</sup>(IgD<sup>+</sup>)CD27<sup>+</sup> B cells and the dynamics of memory B cell generation. J. Exp. Med. 206: 2659-2669.

## CHROMOSOMAL LOCATION

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

## SOURCE

IgD (H-67) is a rabbit polyclonal antibody raised against amino acids 284-350 mapping near the C-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.

## 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.

## APPLICATIONS

IgD (H-67) 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  $\mu$ g per 100-500  $\mu$ 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 ( $\delta$ ) chain: 44-80 kDa.

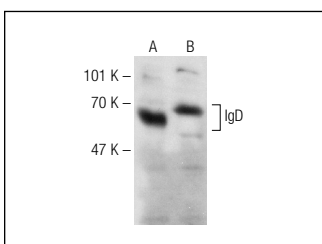
Molecular Weight of IgD light ( $\kappa/\lambda$ ) chain: 21-25 kDa.

Positive Controls: Ramos cell lysate: sc-2216 or CCRF-CEM cell lysate: sc-2225.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



IgD (H-67): sc-99150. Western blot analysis of IgD expression in CCRF-CEM (A) and Ramos (B) whole cell lysates.

## RESEARCH USE

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

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Try **IgD (IgD26): sc-53345**, our highly recommended monoclonal alternative to IgD (H-67).