

IgD chain C (C-5): sc-393519

BACKGROUND

IgD chain C (Ig δ 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 three 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 coactivation of IgD⁺ B cells can have a negative influence on bone resorption during infectious events.

REFERENCES

- 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.
- 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.
- Bassing, C.H., et al. 2003. T cell receptor (TCR) α/δ locus enhancer identity and position are critical for the assembly of TCR δ and α variable region genes. Proc. Natl. Acad. Sci. USA 100: 2598-2603.
- Morabito, F., et al. 2009. Prognostic relevance of *in vitro* response to cell stimulation via surface IgD in binet stage a CLL. Br. J. Haematol. 149: 160-163.
- Baker, P.J., et al. 2009. B cell IgD deletion prevents alveolar bone loss following murine oral infection. Interdiscip. Perspect. Infect. Dis. 2009: 864359.

CHROMOSOMAL LOCATION

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

SOURCE

IgD chain C (C-5) is a mouse monoclonal antibody raised against amino acids 284-350 mapping near the C-terminus of IgD of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IgD chain C (C-5) is available conjugated to agarose (sc-393519 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393519 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393519 PE), fluorescein (sc-393519 FITC), Alexa Fluor[®] 488 (sc-393519 AF488), Alexa Fluor[®] 546 (sc-393519 AF546), Alexa Fluor[®] 594 (sc-393519 AF594) or Alexa Fluor[®] 647 (sc-393519 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-393519 AF680) or Alexa Fluor[®] 790 (sc-393519 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

IgD chain C (C-5) is recommended for detection of IgD of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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.

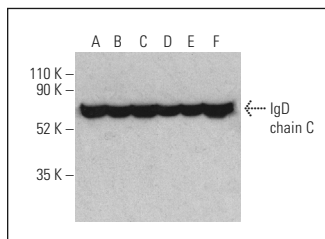
Positive Controls: CCRF-CEM cell lysate: sc-2225, U-698-M whole cell lysate: sc-364799 or NAMALWA cell lysate: sc-2234.

RECOMMENDED SUPPORT REAGENTS

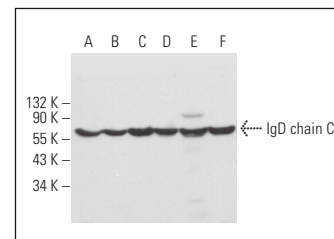
To ensure optimal results, the following support reagents are recommended:

- Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.
- Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- 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.

DATA



IgD chain C (C-5) HRP: sc-393519 HRP. Direct western blot analysis of IgD chain C expression in U-698-M (A), Raji (B), CCRF-CEM (C), Ramos (D), NAMALWA (E) and Daudi (F) whole cell lysates.



IgD chain C (C-5): sc-393519. Western blot analysis of IgD chain C expression in U-698-M (A), GA-10 (B), Raji (C), I-11.15 (D), SP2/0 (E) and WEHI-231 (F) whole cell lysates.

STORAGE

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

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.