

Ig λ chain (48): sc-52339

BACKGROUND

Antibody producing cells of the immune system require multiple rearrangements of immunoglobulin (antibody, Ig) genes. Immunoglobulins are four-chain, Y-shaped, monomeric structures of two identical heavy chains and two identical light chains held together through interchain disulfide bonds. Immunoglobulins in vertebrates help to remove non-self molecules or cells (antigens) by recognizing and binding to the antigen and carrying out effector functions that activate the immune system. Variable genetic combinations of the five heavy chain classes (M, D, G, E and A) and the two light chain isoforms, κ and λ , confer the role of an antibody. The variable region genes encoding immunoglobulin κ and λ chains are assembled from three DNA segments, the V, C and J genes. Human κ light chain genes map to chromosome 2 and the human λ light chain genes map to chromosome 22. κ gene recombination can precede λ gene recombination during B cell ontogeny and only a single light chain type is expressed in individual B cells. Antibodies in camels and sharks can lack light chain, suggesting that light chain may not be essential for antigen binding in some vertebrates.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: IGLC2 (human) mapping to 22p13.

SOURCE

Ig λ chain (48) is a mouse monoclonal antibody raised against isolated Bence Jones λ proteins of human origin.

PRODUCT

Each vial contains 500 μ l culture supernatant containing IgG₁ with < 0.1% sodium azide.

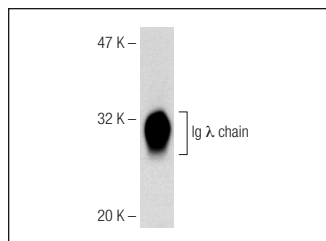
APPLICATIONS

Ig λ chain (48) is recommended for detection of Ig λ chain of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:10-1:200), immunoprecipitation [10-20 μ l per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:10-1:200) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:10-1:200).

Molecular Weight of Ig λ chain: 25-30 kDa.

Positive Controls: U266 whole cell lysate: sc-364800.

DATA



Ig λ chain (48): sc-52339. Western blot analysis of Ig λ chain expression in U266 whole cell lysate.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

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.