

Kaptin (3B1): sc-100918

BACKGROUND

Platelets circulate in the blood as discoid cells which, when activated, change shape by polymerizing Actin into several different structures, such as filopodia and stress fibers. Platelet activation is important for hemostasis. Kaptin (more commonly referred to as 2E4) binds to filamentous (F)-Actin in an ATP-dependent manner and is involved in platelet activation. Kaptin is expressed in platelets, and localizes to the leading edge of the cells, supporting its involvement in the Actin rearrangements that occur during activation. Kaptin is also present at the leading edge of the elongating stereocilium cells in the inner ear which play an integral role in the mechanotransduction of sound. Kaptin is involved in stereocilia formation, and may be an important factor in the development of DFNA4, a form of autosomal dominant non-syndromic hearing loss.

REFERENCES

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- Bearer, E.L., Chen, A.F., Chen, A.H., Li, Z., Mark, H.F., Smith, R.J. and Jackson, C.L. 2001. 2E4/Kaptin (KPTN)-a candidate gene for the hearing loss locus, DFNA4. *Ann. Hum. Genet.* 64: 189-196.
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CHROMOSOMAL LOCATION

Genetic locus: KPTN (human) mapping to 19q13.32.

SOURCE

Kaptin (3B1) is a mouse monoclonal antibody raised against recombinant Kaptin of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain 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.

APPLICATIONS

Kaptin (3B1) is recommended for detection of Kaptin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

Suitable for use as control antibody for Kaptin siRNA (h): sc-60876, Kaptin shRNA Plasmid (h): sc-60876-SH and Kaptin shRNA (h) Lentiviral Particles: sc-60876-V.

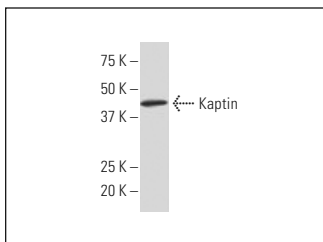
Molecular Weight of Kaptin: 48 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

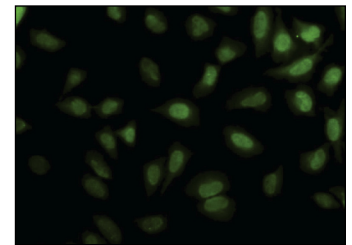
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



Kaptin (3B1): sc-100918. Western blot analysis of Kaptin expression in HeLa nuclear extract.



Kaptin (3B1): sc-100918. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear localization.

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.