SANTA CRUZ BIOTECHNOLOGY, INC.

Kaptin siRNA (m): sc-60877

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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6. 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 (mouse) mapping to 7 A2.

PRODUCT

Kaptin siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Kaptin shRNA Plasmid (m): sc-60877-SH and Kaptin shRNA (m) Lentiviral Particles: sc-60877-V as alternate gene silencing products.

For independent verification of Kaptin (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-60877A, sc-60877B and sc-60877C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Kaptin siRNA (m) is recommended for the inhibition of Kaptin expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Kaptin gene expression knockdown using RT-PCR Primer: Kaptin (m)-PR: sc-60877-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

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.