SANTA CRUZ BIOTECHNOLOGY, INC.

HICE1 siRNA (m): sc-108734

BACKGROUND

Mitotic spindle integrity is critical for efficient mitotic progression and accurate chromosome segregation. HICE1 (Hec1-interacting and centrosome-associated 1), also known as NY-SAR-48 or HAUS8, is a 410 amino acid evolutionarily nonconserved cytoplasmic coiled-coil protein required for chromosomal integrity and stability of mitotic spindles. HICE1 is a component of the HAUS augmin-like complex, which is involved in the regulation of mitotic spindle assembly and centrosome stability. During interphase, HICE1 associates with centrosomes and with the mitotic spindles at the spindle pole vincinity. HICE1 also associates with the spindle midzone during anaphase and with the spindle midbody during telephase. Existing as two alternatively spliced isoforms, HICE1 is considered a novel microtubule-associated protein required for proper completion of cytokinesis.

REFERENCES

1. Lingle, W.L., et al. 2005. Deregulation of the centrosome cycle and the origin of chromosomal instability in cancer. Adv. Exp. Med. Biol. 570: 393-421.
2. Goshima, G., et al. 2008. Augmin: a protein complex required for centrosome-independent microtubule generation within the spindle. J. Cell Biol. 181: 421-429.
3. Wu, G., et al. 2008. HICE1, a novel microtubule-associated protein required for maintenance of spindle integrity and chromosomal stability in human cells. Mol. Cell. Biol. 28: 3652-3662.
4. Lawo, S., et al. 2009. HAUS, the 8-subunit human Augmin complex, regulates centrosome and spindle integrity. Curr. Biol. 19: 816-826.
5. Wu, G., et al. 2009. Hec1 contributes to mitotic centrosomal microtubule growth for proper spindle assembly through interaction with Hice1. Mol. Biol. Cell 20: 4686-4695.
6. Samoshkin, A., et al. 2009. Human condensin function is essential for centromeric chromatin assembly and proper sister kinetochore orientation. PLoS ONE 4: e6831.
7. Uehara, R., et al. 2009. The augmin complex plays a critical role in spindle microtubule generation for mitotic progression and cytokinesis in human cells. Proc. Natl. Acad. Sci. USA 106: 6998-7003.

CHROMOSOMAL LOCATION

Genetic locus: Haus8 (mouse) mapping to 8 B3.3.

PRODUCT

HICE1 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 HICE1 shRNA Plasmid (m): sc-108734-SH and HICE1 shRNA (m) Lentiviral Particles: sc-108734-V as alternate gene silencing products.

For independent verification of HICE1 (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-108734A, sc-108734B and sc-108734C.

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

HICE1 siRNA (m) is recommended for the inhibition of HICE1 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 HICE1 gene expression knockdown using RT-PCR Primer: HICE1 (m)-PR: sc-108734-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.