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Lieferung & Zahlungsart

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SANTA CRUZ BIOTECHNOLOGY, INC.

KIN17 siRNA (h): sc-45958

BACKGROUND

The KIN17 protein binds to bent or curved double-stranded DNA fragments found at illegitimate recombination sites. KIN17 is ubiqutiously expressed with the highest levels of expression in muscle, heart and testis. Low doses of ionizing radiation increase KIN17 expression in mammalian cells. In keratinocytes, KIN17 expression increases during periods of hyperproliferation. UVC irradiation also increases KIN17 expression when functional XPA and XPC proteins are present. Antisense studies indicate that a decrease in KIN17 correlates with a decrease in cell proliferation and an accumulation of cells in early and mid-S phase. SV40-transformed fibroblasts overexpress KIN17, which interacts with Large T antigen and reduces T-antigen-dependent DNA replication. The gene encoding human KIN17 maps to chromosome 10p14.

REFERENCES

1. Mazin, A., et al. 1994. KIN17, a mouse nuclear zinc finger protein that binds preferentially to curved DNA. Nucleic Acids Res. 22: 4335-4341.
2. Mazin, A., et al. 1994. KIN17, a mouse nuclear protein, binds to bent DNA fragments that are found at illegitimate recombination junctions in mammalian cells. Mol. Gen. Genet. 244: 435-438.
3. Biard, D.S., et al. 1997. Enhanced expression of the KIN17 protein immediately after low doses of ionizing radiation. Radiat. Res. 147: 442-450.
4. Biard, D.S., et al. 1997. Differential expression of the HsKIN17 protein during differentiation of *in vitro* reconstructed human skin. Arch. Dermatol. Res. 289: 448-456.
5. Kannouche, P., et al. 2000. Molecular cloning and characterization of the human KIN17 cDNA encoding a component of the UVC response that is conserved among metazoans. Carcinogenesis 21: 1701-1710.
6. Biard, D.S., et al. 2002. Ionizing radiation triggers chromatin-bound KIN17 complex formation in human cells. J. Biol. Chem. 277: 19156-19165.
7. Miccoli, L., et al. 2002. Human KIN17 protein directly interacts with the simian virus 40 large T antigen and inhibits DNA replication. Cancer Res. 62: 5425-5435.
8. Masson, C., et al. 2003. Global genome repair is required to activate KIN17, a UVC-responsive gene involved in DNA replication. Proc. Natl. Acad. Sci. USA 100: 616-621.

CHROMOSOMAL LOCATION

Genetic locus: KIN (human) mapping to 10p14.

PRODUCT

KIN17 siRNA (h) 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 KIN17 shRNA Plasmid (h): sc-45958-SH and KIN17 shRNA (h) Lentiviral Particles: sc-45958-V as alternate gene silencing products.

For independent verification of KIN17 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-45958A, sc-45958B and sc-45958C.

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

KIN17 siRNA (h) is recommended for the inhibition of KIN17 expression in human 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.

GENE EXPRESSION MONITORING

KIN17 (K58): sc-32769 is recommended as a control antibody for monitoring of KIN17 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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) 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor KIN17 gene expression knockdown using RT-PCR Primer: KIN17 (h)-PR: sc-45958-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Zeng, T., et al. 2011. Up-regulation of KIN17 is essential for proliferation of breast cancer. PLoS ONE 6: e25343.

RESEARCH USE

For research use only, not for use in diagnostic procedures.