SANTA CRUZ BIOTECHNOLOGY, INC.

CRF21 siRNA (h): sc-89714

BACKGROUND

CRF21 (cytochrome c-releasing factor 21), also known as GGCT (γ-glutamyl-cyclotransferase), Ggc or GCTG, is a 188 amino acid protein that catalyzes the conversion of 5-oxoproline from γ-glutamyl dipeptides and causes the release of cytochrome c from mitochondria. Existing as two alternatively spliced isoforms, CRF21 is a member of the γ-glutamylcyclotransferase family and is thought to play an essential role in glutathione homeostasis. Expressed at highest levels in bladder and salivary gland, and existing as a homodimer, CRF21 induces apoptosis when stimulated by geranylgeraniol (GGO). The gene encoding CRF21 maps to human chromosome 7, which houses over 1,000 genes, comprises nearly 5% of the human genome and has been linked to Osteogenesis imperfecta, Pendred syndrome, Lissencephaly, Citrullinemia and Shwachman-Diamond syndrome.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: GGCT (human) mapping to 7p14.3.

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.

PRODUCT

CRF21 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 CRF21 shRNA Plasmid (h): sc-89714-SH and CRF21 shRNA (h) Lentiviral Particles: sc-89714-V as alternate gene silencing products.

For independent verification of CRF21 (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-89714A, sc-89714B and sc-89714C.

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

CRF21 siRNA (h) is recommended for the inhibition of CRF21 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CRF21 gene expression knockdown using RT-PCR Primer: CRF21 (h)-PR: sc-89714-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.