SANTA CRUZ BIOTECHNOLOGY, INC.

Kua siRNA (h): sc-106739

BACKGROUND

Uev1A, also designated CROC1, Uev1 and UBE2V1 for ubiquitin-conjugating enzyme E2 variant 1, shows sequence similarity to other ubiquitin-conjugating enzymes, but lacks the conserved cysteine residue critical for their catalytic activity. Therefore, Uev1A does not have ubiquitin-conjugating activity, but it can regulate noncanonical elongation of ubiquitin chains. In humans, the Uev1A gene is adjacent to the Kua gene. These genes are either expressed as separate transcripts encoding independent Kua and UEV1 proteins or as a hybrid Kua-UEV transcript, therefore encoding a two-domain protein. Kua belongs to a class of conserved proteins with juxtamembrane histidine-rich motifs. Also designated transmembrane protein 189 (TMEM189), Kua is a 270 amino acid protein that localizes to the cytoplasm.

REFERENCES

1. Rothofsky, M.L. and Lin, S.L. 1997. CROC-1 encodes a protein which mediates transcriptional activation of the human FOS promoter. Gene 195: 141-149.
2. Sancho, E., Vilá, M.R., Sánchez-Pulido, L., Lozano, J.J., Paciucci, R., Nadal, M., Fox, M., Harvey, C., Bercovich, B., Loukili, N., Ciechanover, A., Lin, S.L., Sanz, F., Estivill, X., Valencia, A. and Thomson, T.M. 1998. Role of UEV-1, an inactive variant of the E2 ubiquitin-conjugating enzymes, in *in vitro* differentiation and cell cycle behavior of HT-29-M6 intestinal mucosecretory cells. Mol. Cell. Biol. 18: 576-589.
3. Hofmann, R.M. and Pickart, C.M. 1999. Noncanonical MMS2-encoded ubiquitin-conjugating enzyme functions in assembly of novel polyubiquitin chains for DNA repair. Cell 96: 645-653.
4. Deng, L., Wang, C., Spencer, E., Yang, L., Braun, A., You, J., Slaughter, C., Pickart, C. and Chen, Z.J. 2000. Activation of the IkappaB kinase complex by TRAF6 requires a dimeric ubiquitin-conjugating enzyme complex and a unique polyubiquitin chain. Cell 103: 351-361.
5. Thomson, T.M., Lozano, J.J., Loukili, N., Carrió, R., Serras, F., Cormand, B., Valeri, M., Díaz, V.M., Abril, J., Burset, M., Merino, J., Macaya, A., Corominas, M. and Guigó, R. 2000. Fusion of the human gene for the polyubiquitination coeffector UEV1 with Kua, a newly identified gene. Genome Res. 10: 1743-1756.
6. Ito, M., Shichijo, S., Tsuda, N., Ochi, M., Harashima, N., Saito, N. and Itoh, K. 2001. Molecular basis of T cell-mediated recognition of pancreatic cancer cells. Cancer Res. 61: 2038-2046.
7. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 602995. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: TMEM189 (human) mapping to 20q13.13.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

Kua siRNA (h) is a pool of 2 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 Kua shRNA Plasmid (h): sc-106739-SH and Kua shRNA (h) Lentiviral Particles: sc-106739-V as alternate gene silencing products.

For independent verification of Kua (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-106739A and sc-106739B.

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

Kua siRNA (h) is recommended for the inhibition of Kua 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 Kua gene expression knockdown using RT-PCR Primer: Kua (h)-PR: sc-106739-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.