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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# FucT-VIII siRNA (h): sc-45757

## BACKGROUND

Fucosyltransferases catalyze the covalent association of fucose to different positional linkages in sugar acceptor molecules. The carbohydrate moieties generated and covalently attached to cell surfaces are necessary to ensure a surface contour that satisfies physiological roles, which are reliant on adhesion molecules such as Selectins. Hematopoietic lineages rely on Fucosyltransferases to confer a surface carbohydrate phenotype, which mediates proper cell adhesion molecule recruitment and cell trafficking.  $\alpha$ 1,6-fucosyltransferase or Fucosyltransferase 8 (FucT-VIII) catalyzes the addition of fucose in  $\alpha$ 1-6 linkage to the innermost GlcNAc residue of an N-linked oligosaccharide.

## REFERENCES

1. Yanagidani, S., et al. 1997. Purification and cDNA cloning of GDP-L-Fuc:N-acetyl- $\beta$ -D-glucosaminide:  $\alpha$ 1-6 fucosyltransferase ( $\alpha$ 1-6 FucT) from human gastric cancer MKN45 cells. *J. Biochem.* 121: 626-632.
2. Takahashi, T., et al. 2000. A sequence motif involved in the donor substrate binding by  $\alpha$ 1,6-fucosyltransferase: the role of the conserved arginine residues. *Glycobiology* 10: 503-510.
3. Yamaguchi, Y., et al. 2000. Genomic structure and promoter analysis of the human  $\alpha$ 1,6-fucosyltransferase gene (FUT8). *Glycobiology* 10: 637-643.
4. White, K.E., et al. 2000. Molecular cloning of a novel human UDP-GalNAc: polypeptide N-acetylgalactosaminyltransferase, GalNAc-T8, and analysis as a candidate autosomal dominant hypophosphatemic rickets (ADHR) gene. *Gene* 246: 347-356.
5. Javaud, C., et al. 2000. Ancestral exonic organization of FUT8, the gene encoding the  $\alpha$ 6-fucosyltransferase, reveals successive peptide domains which suggest a particular three-dimensional core structure for the  $\alpha$ 6-fucosyltransferase family. *Mol. Biol. Evol.* 17: 1661-1672.

## CHROMOSOMAL LOCATION

Genetic locus: FUT8 (human) mapping to 14q23.3.

## PRODUCT

FucT-VIII 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see FucT-VIII shRNA Plasmid (h): sc-45757-SH and FucT-VIII shRNA (h) Lentiviral Particles: sc-45757-V as alternate gene silencing products.

For independent verification of FucT-VIII (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-45757A, sc-45757B and sc-45757C.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

FucT-VIII shRNA Plasmid (h) is recommended for the inhibition of FucT-VIII 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  $\mu$ M in 66  $\mu$ l. 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

FucT-VIII (B-10): sc-271244 is recommended as a control antibody for monitoring of FucT-VIII 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-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 FucT-VIII gene expression knockdown using RT-PCR Primer: FucT-VIII (h)-PR: sc-45757-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.