

# $\alpha$ -defensin 20 siRNA (m): sc-142591

## BACKGROUND

Cryptdin seems to be restricted to Paneth cells in adult mice, but is found throughout the intestinal epithelium and is not associated with rudimentary crypts in newborn mice. Cryptdins may also inhibit bacterial translocation, modulate intestinal hormone synthesis, influence hormonal sensitivity of the intestinal epithelium and exhibit a multiplicity of related activities.  $\alpha$ -defensin 20 is a 92 amino acid protein belonging to the alpha-defensin family. Defensins are antimicrobial peptides characterized by several conserved amino acids. These conserved sequences include six invariant cysteine residues that can form up to three intrapeptidic disulfide bonds that help to stabilize their tertiary structure. Consisting of one signal peptide and a propeptide,  $\alpha$ -defensin 20 can be pared down to a small peptide that acts as a potent bactericidal agent by forming a microbial barrier along small bowel mucosa.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: Defcr20 (mouse) mapping to 8 A2.

## PRODUCT

$\alpha$ -defensin 20 siRNA (m) is a target-specific 19-25 nt siRNA 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  $\alpha$ -defensin 20 shRNA Plasmid (m): sc-142591-SH and  $\alpha$ -defensin 20 shRNA (m) Lentiviral Particles: sc-142591-V as alternate gene silencing products.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at  $-20^{\circ}$  C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at  $-20^{\circ}$  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

$\alpha$ -defensin 20 siRNA (m) is recommended for the inhibition of  $\alpha$ -defensin 20 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  $\mu$ 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.

## 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.