SANTA CRUZ BIOTECHNOLOGY, INC.

CPXCR1 siRNA (m): sc-142552

BACKGROUND

CPXCR1 (CPX chromosomal region candidate gene 1 protein) is a 301 amino acid protein encoded by the human gene CPXCR1 located on the X chromosome. The CPXCR1 chromosomal region is known as the X-linked cleft palate and ankyloglossia (CPX) critical region. X-linked cleft palate (CPX), a congenital, semi-dominant disorder that is influenced only by genetic factors, is influenced by mutations within this region. Ankyloglossia (tongue-tie) is also associated with X-linked cleft palate in an Icelandic population. In this population the gene responsible for cleft palate (CPX) was assigned to the Xq21.3-q22 region between DXYS12 and DXS17.

REFERENCES

1. Björnsson, A., et al. 1989. X-linked cleft palate and ankyloglossia in an Icelandic family. Cleft Palate J. 26: 3-8.
2. Gorski, S.M., et al. 1992. The gene responsible for X-linked cleft palate (CPX) in a British Columbia native kindred is localized between PGK1 and DXYS1. Am. J. Hum. Genet. 50: 1129-1136.
3. Gorski, S.M., et al. 1994. Linkage analysis of X-linked cleft palate and ankyloglossia in Manitoba Mennonite and British Columbia Native kindreds. Hum. Genet. 94: 141-148.
4. Forbes, S.A., et al. 1996. Refined mapping and YAC contig construction of the X-linked cleft palate and ankyloglossia locus (CPX) including the proximal X-Y homology breakpoint within Xq21.3. Genomics 31: 36-43.
5. Siderius, L.E., et al. 1999. X-linked mental retardation associated with cleft lip/palate maps to Xp11.3-q21.3. Am. J. Med. Genet. 85: 216-220.
6. Wong, F.K., et al. 2000. Linkage analysis of candidate regions in Swedish nonsyndromic cleft lip with or without cleft palate families. Cleft Palate Craniofac. J. 37: 357-362.
7. Braybrook, C., et al. 2001. Physical and transcriptional mapping of the X-linked cleft palate and ankyloglossia (CPX) critical region. Hum. Genet. 108: 537-545.

CHROMOSOMAL LOCATION

Genetic locus: Cpxcr1 (mouse) mapping to X E1.

PRODUCT

CPXCR1 siRNA (m) 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 CPXCR1 shRNA Plasmid (m): sc-142552-SH and CPXCR1 shRNA (m) Lentiviral Particles: sc-142552-V as alternate gene silencing products.

For independent verification of CPXCR1 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-142552A, sc-142552B and sc-142552C.

RESEARCH USE

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

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

CPXCR1 siRNA (m) is recommended for the inhibition of CPXCR1 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 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

CPXCR1 (H-9): sc-271598 is recommended as a control antibody for monitoring of CPXCR1 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 CPXCR1 gene expression knockdown using RT-PCR Primer: CPXCR1 (m)-PR: sc-142552-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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