SANTA CRUZ BIOTECHNOLOGY, INC.

ADAM39 siRNA (m): sc-140861

BACKGROUND

ADAMs (a disintegrin and metalloproteinase) are single-pass transmembrane, secretion enabling metalloendopeptidases, eliciting post translation proteolytic ectodomain shedding/processing of growth factors, cytokine/chemokines, adhesion molecules and cell surface receptors. ADAMs contain characteristic pro-domain, metalloprotease, disintegrin, cysteine-rich, epidermal-growth factor-like, transmembrane and cytoplasmic (C-terminal) domains. ADAM-dependent ectodomain targeting proteolysis of cell surface receptors and pro-form embedded signaling molecules generates a broad and constantly changing systemic/secreted protein signature. ADAMs influence sperm-egg fusion, cell fate, cell migration, muscle development, immunity and additional mechanisms. Systemic release of soluble molecules into blood tissue creates a reservoir for biomarker fingerprint characterization, and may contribute to novel and accurate diagnosis of phenotype aberrations; early cancer, inflammation and neurodegenerative. Murine ADAM39 (human ADAM20 ortholog), is testes specific, and influences male gonad development.

REFERENCES

1. Edwards, D.R., et al. 2008. The ADAM metalloproteinases. Mol. Aspects Med. 29: 258-289.
2. Klein, T. and Bischoff, R. 2011. Active metalloproteases of the a disintegrin and metalloprotease (ADAM) family: biological function and structure. J. Proteome Res. 10: 17-33.
3. van der Vorst, E.P., et al. 2012. A disintegrin and metalloproteases: molecular scissors in angiogenesis, inflammation and atherosclerosis. Atherosclerosis 224: 302-308.
4. Herrlich, P. and Herrlich, A. 2017. ADAM metalloprotease-released cancer biomarkers. Trends Cancer 3: 482-490.

CHROMOSOMAL LOCATION

Genetic locus: Adam39 (mouse) mapping to 8 A4.

PRODUCT

ADAM39 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 ADAM39 shRNA Plasmid (m): sc-140861-SH and ADAM39 shRNA (m) Lentiviral Particles: sc-140861-V as alternate gene silencing products.

For independent verification of ADAM39 (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-140861A, sc-140861B and sc-140861C.

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.

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

ADAM39 siRNA (m) is recommended for the inhibition of ADAM39 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ADAM39 gene expression knockdown using RT-PCR Primer: ADAM39 (m)-PR: sc-140861-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.