

Calgranulin A siRNA (m): sc-43343

BACKGROUND

The family of EF-hand type Ca^{2+} -binding proteins includes Calbindin (previously designated vitamin D-dependent Ca^{2+} -binding protein), S-100 α and β , Calgranulin A (also designated MRP8), Calgranulin B (also designated MRP14) and Calgranulin C (S-100 like protein), and the parvalbumin family members, including parvalbumin α and parvalbumin β (also designated oncomodulin). Calbindin, S-100 proteins and parvalbumin proteins are each expressed in neural tissues. In addition, S-100 α and β are present in a variety of other tissues, and Calbindin is present in intestine and kidney. Parvalbumin α is also found in fast-contracting/relaxing skeletal muscle fibers and parvalbumin β is found in many tumor tissues as well as in the organ of Corti. Calbindin, S-100 proteins and parvalbumins have all been detected in Leydig cells and testis. These proteins are thought to play a role in hormone production and spermatogenesis. Calgranulin is expressed in macrophages and epithelial cells.

REFERENCES

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2. Heizmann, C.W. 1988. Calcium-binding proteins of the EF-type. *J. Cardiovasc. Pharmacol.* 5: S30-S37.
3. Kagi, U., et al. 1988. Developmental appearance of the Ca^{2+} -binding proteins parvalbumin, calbindin D-28K, S-100 proteins and calmodulin during testicular development in the rat. *Cell Tissue Res.* 252: 359-365.
4. Zimmer, D.B., et al. 1991. Isolation of a rat S100 α cDNA and distribution of its mRNA in rat tissues. *Brain Res. Bull.* 27: 157-162.
5. Rickmann, M. and Wolff, J.R. 1995. S100 protein expression in subpopulations of neurons of rat brain. *Neuroscience* 67: 977-991.
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7. Muntener, M., et al. 1995. Increase of skeletal muscle relaxation speed by direct injection of parvalbumin cDNA. *Proc. Natl. Acad. Sci. USA* 92: 6504-6508.
8. Hitomi, J., et al. 1996. A novel calcium-binding protein in amniotic fluid. CAAF1: its molecular cloning and tissue distribution. *J. Cell Sci.* 109: 805-815.

CHROMOSOMAL LOCATION

Genetic locus: S100a8 (mouse) mapping to 3 F1.

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.

PRODUCT

Calgranulin A 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 Calgranulin A shRNA Plasmid (m): sc-43343-SH and Calgranulin A shRNA (m) Lentiviral Particles: sc-43343-V as alternate gene silencing products.

For independent verification of Calgranulin A (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-43343A, sc-43343B and sc-43343C.

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

Calgranulin A siRNA (m) is recommended for the inhibition of Calgranulin A 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.