SANTA CRUZ BIOTECHNOLOGY, INC.

Psoriasin siRNA (h): sc-106459

BACKGROUND

Psoriasin, also known as PSOR1 or S-100A7, is a 101 amino acid protein that belongs to the S-100 family of calcium binding proteins and is secreted via a non-classical secretory pathway into the cytoplasm. Expressed in fetal ear, tongue and skin, Psoriasin is thought to function in the regulation of many cellular processes, including the cell cycle, cell progression and cellular differentiation. Psoriasin contains two EF-hand domains and is highly upregulated in psoriatic epidermis, as well as in bladder squamous cell carcinoma and breast cancer tissue, suggesting a possible role in carcinogenesis. The gene encoding Psoriasin and the related S100A15 gene are thought to have diverged from one mouse gene, designated S100A15. In humans, the S100A15 gene encodes a calcium binding protein, also known as S-100A7A, that shares 95% sequence identity with Psoriasin.

REFERENCES

1. Brodersen, D.E., et al. 1998. EF-hands at atomic resolution: the structure of human Psoriasin (S-100A7) solved by MAD phasing. Structure 6: 477-489.
2. Ruse, M., et al. 2003. S-100A7 (Psoriasin) interacts with epidermal fatty acid binding protein and localizes in focal adhesion-like structures in cultured keratinocytes. J. Invest. Dermatol. 121: 132-141.
3. Wolf, R., et al. 2003. Molecular cloning and characterization of alternatively spliced mRNA isoforms from psoriatic skin encoding a novel member of the S-100 family. FASEB J. 17: 1969-1971.
4. Jiang, W.G., et al. 2004. Psoriasin is aberrantly expressed in human breast cancer and is related to clinical outcomes. Int. J. Oncol. 25: 81-85.
5. Martinsson, H., et al. 2005. Expression patterns of S-100A7 (Psoriasin) and S-100A9 (Calgranulin B) in keratinocyte differentiation. Exp. Dermatol. 14: 161-168.
6. Webb, M., et al. 2005. Expression analysis of the mouse S100A7/Psoriasin gene in skin inflammation and mammary tumorigenesis. BMC Cancer 5: 17.
7. Porre, S., et al. 2005. Psoriasin, a calcium-binding protein with chemotactic properties is present in the third trimester amniotic fluid. Mol. Hum. Reprod. 11: 87-92.
8. Eckert, R.L., et al. 2006. S-100A7 (Psoriasin): a story of mice and men. J. Invest. Dermatol. 126: 1442-1444.

CHROMOSOMAL LOCATION

Genetic locus: S100A7 (human) mapping to 1q21.3.

PRODUCT

Psoriasin siRNA (h) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Psoriasin shRNA Plasmid (h): sc-106459-SH and Psoriasin shRNA (h) Lentiviral Particles: sc-106459-V as alternate gene silencing products.

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

Psoriasin siRNA (h) is recommended for the inhibition of Psoriasin 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 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

Psoriasin (H-6): sc-166869 is recommended as a control antibody for monitoring of Psoriasin 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.

SELECT PRODUCT CITATIONS

1. Vegfors, J., et al. 2012. The expression of Psoriasin (S100A7) and CD24 is linked and related to the differentiation of mammary epithelial cells. PLoS ONE 7: e53119.
2. Vegfors, J., et al. 2016. Psoriasin (S100A7) promotes stress-induced angiogenesis. Br. J. Dermatol. 175: 1263-1273.

PROTOCOLS

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