



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

# Sprr2a siRNA (m): sc-153790

## BACKGROUND

The small proline rich protein (SPRR) gene family encodes a conserved group of cornified envelope (CE) proteins that are part of the human epidermal differentiation complex (EDC). The formation of the cornified envelope during the late stages of epidermal differentiation is essential for epidermal barrier function and protects the body against environmental attack and water loss. Additionally, the expression of SPRR proteins is linked to keratinocyte terminal differentiation. The SPRR gene family, namely comprises three subclasses of genes, SPRR1 (which contains two members), SPRR2 (which contains eight members) and SPRR3 (which contains one member). SPRR1 is found predominantly in follicular epidermis and oral mucosa, SPRR2 is expressed coherently in follicular and interfollicular epidermis and SPRR3 is absent in epidermis and strongly expressed in internal squamous.

## REFERENCES

1. Yaar, M., Eller, M.S., Bhawan, J., Harkness, D.D., DiBenedetto, P.J. and Gilchrist, B.A. 1995. *In vivo* and *in vitro* SPRR1 gene expression in normal and malignant keratinocytes. *Exp. Cell Res.* 217: 217-226.
2. Hohl, D., de Viragh, P.A., Amiguet-Barras, F., Gibbs, S., Backendorf, C. and Huber, M. 1995. The small proline-rich proteins constitute a multigene family of differentially regulated cornified cell envelope precursor proteins. *J. Invest. Dermatol.* 104: 902-909.
3. Austin, S.J., Fujimoto, W., Marvin, K.W., Vollberg, T.M., Lorand, L. and Jetten, A.M. 1996. Cloning and regulation of cornifin  $\beta$ , a new member of the cornifin/spr family. Suppression by retinoic acid receptor-selective retinoids. *J. Biol. Chem.* 271: 3737-3742.
4. Lohman, F.P., Medema, J.K., Gibbs, S., Ponec, M., van de Putte, P. and Backendorf, C. 1997. Expression of the SPRR cornification genes is differentially affected by carcinogenic transformation. *Exp. Cell Res.* 231: 141-148.
5. Zimmermann, N., Doepker, M.P., Witte, D.P., Stringer, K.F., Fulkerson, P.C., Pope, S.M., Brandt, E.B., Mishra, A., King, N.E., Nikolaidis, N.M., Wills-Karp, M., Finkelman, F.D. and Rothenberg, M.E. 2005. Expression and regulation of small proline-rich protein 2 in allergic inflammation. *Am. J. Respir. Cell Mol. Biol.* 32: 428-435.
6. Fischer, D.F. and Backendorf, C. 2005. Promoter analysis in the human SPRR gene family. *Methods Mol. Biol.* 289: 303-314.
7. Tong, L., Corrales, R.M., Chen, Z., Villarreal, A.L., De Paiva, C.S., Beuerman, R., Li, D.Q. and Pflugfelder, S.C. 2006. Expression and regulation of cornified envelope proteins in human corneal epithelium. *Invest. Ophthalmol. Vis. Sci.* 47: 1938-1946.
8. Li, S., Nikulina, K., DeVoss, J., Wu, A.J., Strauss, E.C., Anderson, M.S. and McNamara, N.A. 2008. Small proline-rich protein 1B (SPRR1B) is a biomarker for squamous metaplasia in dry eye disease. *Invest. Ophthalmol. Vis. Sci.* 49: 34-41.
9. Demetris, A.J., Specht, S., Nozaki, I., Lunz, J.G., Stolz, D.B., Murase, N. and Wu, T. 2008. Small proline-rich proteins (SPRR) function as SH3 domain ligands, increase resistance to injury and are associated with epithelial-mesenchymal transition (EMT) in cholangiocytes. *J. Hepatol.* 48: 276-288.

## CHROMOSOMAL LOCATION

Genetic locus: Sprr2a1 (mouse) mapping to 3 F1.

## PRODUCT

Sprr2a 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Sprr2a shRNA Plasmid (m): sc-153790-SH and Sprr2a shRNA (m) Lentiviral Particles: sc-153790-V as alternate gene silencing products.

For independent verification of Sprr2a (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-153790A, sc-153790B and sc-153790C.

## 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  $\mu$ 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

Sprr2a siRNA (m) is recommended for the inhibition of Sprr2a 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Sprr2a gene expression knockdown using RT-PCR Primer: Sprr2a (m)-PR: sc-153790-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## RESEARCH USE

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