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

www.szabo-scandic.com

linkedin.com/company/szaboscandic

SANTA CRUZ BIOTECHNOLOGY, INC.

SHP siRNA (m): sc-44870

BACKGROUND

SHP (short heterodimer partner and small heterodimer partner) is an orphan nuclear receptor containing the dimerization and ligand-binding domains found in other nuclear receptors, but lacking the conserved DNA binding domain. SHP is specifically expressed in liver and other tissues, including fetal liver and adrenal gland, as well as adult spleen and small intestine. In addition, SHP is highy expressed in the murine macrophage cell line RAW 264.7 but suppressed by oxLDL and 13-HODE, which is a ligand for PPARγ. SHP interacts with nuclear receptors, including thyroid receptor, retinoic acid receptors (RAR and RXR) and estrogen receptors (ERα and ERβ). SHP functions as a negative regulator of these receptors by at least three mechanisms: inhibition of DNA binding via dimerization, direct antagonism of coactivator function through competition and possibly transrepression via recruitment of putative corepressors. In oxLDL-treated, resting macrophage cells, SHP acts as a transcription coactivator of NFκB, suggesting that SHP is a modulatory component in the regulation of the transcriptional activities of NFκB. Lastly, negative feedback regulation of a hepatic bile acid transporter, NTCP, is controlled by bile acid-activated FXR via induction of SHP to protect the hepatocyte from bile acid-mediated damage in cholestatic conditions.

REFERENCES

1. Seol, W., et al. 1996. An orphan nuclear hormone receptor that lacks a DNA binding domain and heterodimerizes with other receptors. Science 272: 1336-1339.
2. Seol, W., et al. 1998. Inhibition of estrogen receptor action by the orphan receptor SHP (short heterodimer partner). Mol. Endocrinol. 12: 1551-1557.
3. Lee, H.K., et al. 1998. Structure and expression of the orphan nuclear receptor SHP gene. J. Biol. Chem. 273: 14398-14402.
4. Johansson, L., et al. 2000. The orphan nuclear receptor SHP utilizes conserved LXXLL-related motifs for interactions with ligand-activated estrogen receptors. Mol. Cell. Biol. 20: 1124-1133.
5. Klinge, C.M., et al. 2001. Short heterodimer partner (SHP) orphan nuclear receptor inhibits the transcriptional activity of aryl hydrocarbon receptor (AHR)/AHR nuclear translocator (ARNT). Arch. Biochem. Biophys. 390: 64-70.

CHROMOSOMAL LOCATION

Genetic locus: Nr0b2 (mouse) mapping to 4 D2.3.

PRODUCT

SHP 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 SHP shRNA Plasmid (m): sc-44870-SH and SHP shRNA (m) Lentiviral Particles: sc-44870-V as alternate gene silencing products.

For independent verification of SHP (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-44870A, sc-44870B and sc-44870C.

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

SHP siRNA (m) is recommended for the inhibition of SHP 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 SHP gene expression knockdown using RT-PCR Primer: SHP (m)-PR: sc-44870-PR (20 µl, 419 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Lodeiro, M., et al. 2011. The SHP-1 protein tyrosine phosphatase negatively modulates Akt signaling in the ghrelin/GHSR1a system. Mol. Biol. Cell 22: 4182-4191.
2. Silva, P.N., et al. 2013. Fibroblast growth factor receptor like-1 (FGFRL1) interacts with SHP-1 phosphatase at Insulin secretory granules and induces β-cell ERK1/2 protein activation. J. Biol. Chem. 288: 17859-17870.
3. Jin, D., et al. 2020. Farnesoid X receptor activation protects liver from ischemia/reperfusion injury by up-regulating small heterodimer partner in Kupffer cells. Hepatol. Commun. 4: 540-554.

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.