

TG1019 siRNA (h): sc-61677

BACKGROUND

TG1019 is a G protein-coupled receptor that functions as a chemoattractant for eosinophils and neutrophils. TG1019 is expressed in various tissues except the brain, with the highest expression in liver, kidney, peripheral leukocyte, lung and spleen. TG1019 interacts with the protein OXE to form TG1019/OXE, a $G_{\alpha i/o}$ protein-coupled receptor. Signals from TG1019 are transduced via a $G_{\alpha i/o}$ protein to PLC/calcium, MEK/ERK and PI3K/Akt pathways. Signal transduction from TG1019 following stimulation with 5-oxo-6E,8Z,11Z,14Z eicosatetraenoic acid (5-oxo-EETE) induces intracellular calcium mobilization and rapid activation of MEK/ERK and PI3K/Akt pathways. TG1019 also may play a role in downregulating cAMP production.

REFERENCES

- Hosoi, T., et al. 2002. Identification of a novel human eicosanoid receptor coupled to $G_{i/o}$. *J. Biol. Chem.* 277: 31459-31465.
- Vrecl, M., et al. 2004. Development of a BRET2 screening assay using β -Arrestin-2 mutants. *J. Biomol. Screen.* 9: 322-333.
- Hosoi, T., et al. 2005. TG1019/OXE, a $G_{\alpha i/o}$ protein-coupled receptor, mediates 5-oxo-eicosa-tetraenoic acid-induced chemotaxis. *Biochem. Biophys. Res. Commun.* 334: 987-995.
- Jones, C.E. 2005. The OXE receptor: a new therapeutic approach for asthma? *Trends Mol. Med.* 11: 266-270.
- Powell, W.S. and Rokach, J. 2005. Biochemistry, biology and chemistry of the 5-lipoxygenase product 5-oxo-EETE. *Prog. Lipid Res.* 44: 154-183.

CHROMOSOMAL LOCATION

Genetic locus: OXER1 (human) mapping to 2p21.

PRODUCT

TG1019 siRNA (h) 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see TG1019 shRNA Plasmid (h): sc-61677-SH and TG1019 shRNA (h) Lentiviral Particles: sc-61677-V as alternate gene silencing products.

For independent verification of TG1019 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-61677A, sc-61677B and sc-61677C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

TG1019 siRNA (h) is recommended for the inhibition of TG1019 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 μ M in 66 μ 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 TG1019 gene expression knockdown using RT-PCR Primer: TG1019 (h)-PR: sc-61677-PR (20 μ 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.

PROTOCOLS

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