

TPMT siRNA (m): sc-61702

BACKGROUND

Thiopurine S-methyltransferase (TPMT), also designated thiopurine methyltransferase, acts as a catalyst for the S-methylation of thiopurine drugs such as 6-mercaptopurine. TPMT, usually found as a monomer, is inhibited by S-adenosyl-L-homocysteine. It is a cytoplasmic protein belongs to the TPMT subfamily of the larger methyltransferase superfamily of proteins. TPMT activity varies among different ethnic groups, with a large majority of Caucasians having a high TPMT activity. A common genetic polymorphism controls the level of TPMT activity. The level of TPMT activity is associated with the variation in efficacy and toxicity of thiopurine drugs.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Tpm1 (mouse) mapping to 13 A5.

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

TPMT 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see TPMT shRNA Plasmid (m): sc-61702-SH and TPMT shRNA (m) Lentiviral Particles: sc-61702-V as alternate gene silencing products.

For independent verification of TPMT (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-61702A, sc-61702B and sc-61702C.

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

TPMT siRNA (m) is recommended for the inhibition of TPMT 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 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 TPMT gene expression knockdown using RT-PCR Primer: TPMT (m)-PR: sc-61702-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.