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# TMEM45A siRNA (m): sc-154470

## BACKGROUND

Taxol, also known as Paclitaxel, is a mitotic inhibitor derived from the bark of the Pacific yew tree (*Taxus brevifolia*). Taxol is widely used in cancer chemotherapy as an anticancer drug, treating patients with ovarian, lung, breast, prostate, head and neck cancer, as well as other neoplasms. TMEM45A (transmembrane protein 45A), also known as DERP7 (dermal papilla-derived protein 7) or DNAPTP4 (DNA polymerase-transactivated protein 4), is a 275 amino acid multi-pass membrane protein that may be associated with taxol resistance. Treatment of MDA-MB-231 human breast cancer cells and Hep G2 human hepatoma cells with taxol increased expression of TMEM45A, protecting cells from apoptosis and death by hypoxia. Highly expressed in epidermal keratinocytes, TMEM45A localizes to the Golgi apparatus and may be involved in epithelial functions.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: Tmem45a (mouse) mapping to 16 C1.1.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## PRODUCT

TMEM45A 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 TMEM45A shRNA Plasmid (m): sc-154470-SH and TMEM45A shRNA (m) Lentiviral Particles: sc-154470-V as alternate gene silencing products.

For independent verification of TMEM45A (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-154470A, sc-154470B and sc-154470C.

## 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

TMEM45A siRNA (m) is recommended for the inhibition of TMEM45A 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 TMEM45A gene expression knockdown using RT-PCR Primer: TMEM45A (m)-PR: sc-154470-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.