SANTA CRUZ BIOTECHNOLOGY, INC.

Met siRNA (m): sc-35924

BACKGROUND

The c-Met oncogene was originally isolated from a chemical carcinogen-treated human osteogenic sarcoma cell line by transfection analysis in NIH/3T3 cells. The Met proto-oncogene product was identified as a transmembrane receptor-like protein with tyrosine kinase activity that is expressed in many tissues. A high proportion of spontaneous NIH/3T3 transformants overexpress c-Met and by transfection analysis the c-Met proto-oncogene has been shown to exhibit transforming activity. Tyrosine phosphorylation of apparently normal Met protein has also been observed in certain human gastric carcinoma cell lines. The c-Met gene product has been identified as the cell-surface receptor for hepatocyte growth factor, a plasminogen-like protein thought to be a humoral mediator of liver regeneration.

REFERENCES

1. Cooper, C.S., et al. 1984. Molecular cloning of a new transforming gene from a chemically transformed human cell line. Nature 311: 29-33.
2. Park, M., et al. 1986. Mechanism of Met oncogene activation. Cell 45: 895-904.
3. Cooper, C.S., et al. 1986. Amplification and overexpression of the Met gene in spontaneously transformed NIH3T3 mouse fibroblasts. EMBO J. 5: 2623-2628.

CHROMOSOMAL LOCATION

Genetic locus: Met (mouse) mapping to 6 A2.

PRODUCT

Met siRNA (m) is a pool of 2 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 Met shRNA Plasmid (m): sc-35924-SH and Met shRNA (m) Lentiviral Particles: sc-35924-V as alternate gene silencing products.

For independent verification of Met (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-35924A and sc-35924B.

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

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

GENE EXPRESSION MONITORING

Met (B-2): sc-8057 is recommended as a control antibody for monitoring of Met gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Met gene expression knockdown using RT-PCR Primer: Met (m)-PR: sc-35924-PR (20 µl, 524 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Cheng, C.Y., et al. 2014. miR-34 cooperates with p53 in suppression of prostate cancer by joint regulation of stem cell compartment. Cell Rep. 6: 1000-1007.
2. Lee, C., et al. 2018. Dual targeting c-Met and VEGFR2 in osteoblasts suppresses growth and osteolysis of prostate cancer bone metastasis. Cancer Lett. 414: 205-213.
3. Koustas, E., et al. 2020. Inhibition of c-MET increases the antitumour activity of PARP inhibitors in gastric cancer models. J. Cell. Mol. Med. 24: 10420-10431.
4. Okui, T., et al. 2023. The acid-sensing nociceptor TRPV1 controls breast cancer progression in bone via regulating HGF secretion from sensory neurons. Res. Sq. E-published.

RESEARCH USE

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