SANTA CRUZ BIOTECHNOLOGY, INC.

p-Met (Tyr 1313): sc-34085

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The Power to Question

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. Tyrosine phosphorylation enhances the receptor kinase activity, while serine phosphorylation of Met on residue 985 has an inhibitory effect. 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 NIH/3T3 mouse fibroblasts. EMBO J. 5: 2623-2628.
4. Chan, A.M., et al. 1988. Characterization of the mouse Met proto-oncogene. Oncogene 2: 593-599.
5. Giordano, S., et al. 1988. p145, a protein with associated tyrosine kinase activity in a human gastric carcinoma cell line. Mol. Cell. Biol. 8: 3510-3517.
6. Bottaro, D.P., et al. 1991. Identification of the hepatocyte growth factor receptor as the c-Met proto-oncogene product. Science 251: 802-904.
7. Gandino, L., et al. 1994. Phosphorylation of Serine 985 negatively regulates the hepatocyte growth factor receptor kinase. J. Biol. Chem. 269: 1815-1820.

CHROMOSOMAL LOCATION

Genetic locus: MET (human) mapping to 7q31.2; Met (mouse) mapping to 6 A2.

SOURCE

p-Met (Tyr 1313) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Tyr 1313 phosphorylated Met of human origin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-34085 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-Met (Tyr 1313) is recommended for detection of Tyr 1313 phosphorylated Met of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p-Met (Tyr 1313) is also recommended for detection of correspondingly phosphorylated Met in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Met siRNA (h): sc-29397, Met siRNA (m): sc-35924, Met shRNA Plasmid (h): sc-sc-29397-SH, Met shRNA Plasmid (m): sc-35924-SH, Met shRNA (h) Lentiviral Particles: sc-sc-29397-V and Met shRNA (m) Lentiviral Particles: sc-35924-V.

Molecular Weight of p-Met: 131 kDa.

Positive Controls: A-431 + EGF whole cell lysate: sc-2202.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Shen, Z., et al. 2008. The kringle 1 domain of hepatocyte growth factor has anti-angiogenic and antitumor cell effects on hepatocellular carcinoma. Cancer Res. 68: 404-414.
2. Pavone, L.M., et al. 2011. Intracellular signaling cascades triggered by the NK1 fragment of hepatocyte growth factor in human prostate epithelial cell line PNT1A. Cell. Signal. 23: 1961-1971.
3. Usatyuk, P.V., et al. 2014. Role of c-Met/phosphatidylinositol 3-kinase (PI3k)/Akt signaling in hepatocyte growth factor (HGF)-mediated lamellipodia formation, reactive oxygen species (ROS) generation, and motility of lung endothelial cells. J. Biol. Chem. 289: 13476-13491.