HGFL β (49R12): sc-80039

SANTA CRUZ®
BIOTECHNOLOGY

The Power to Question

BACKGROUND

Hepatocyte growth factor, or HGF, is a pleiotropic growth factor variously referred to as scatter factor, hematopoietin A and mammary growth factor. Biologically active HGF is composed of a disulfide linked α chain and a β chain, both of which are highly glycosylated. A related protein, hepatocyte growth factor-like protein (HGFL), is also composed of disulfide linked α and β chains. The HGFL α chain contains an N-terminal hairpin loop structure and four kringle domains. The HGFL β chain contains a serine protease-like domain. HGFL, sometimes referred to as macrophage-stimulating protein or MSP, is a mediator of the inflammatory response and is required to evoke the chemotactic response of peritoneal macrophages. In epithelial cells HGFL induces the autophosphorylation of the receptor tyrosine kinase Ron which is followed by DNA synthesis. This data suggests Ron to be the *in vivo* HGFL receptor.

REFERENCES

1. Han, S., Stuart, L.A. and Degen, S.J.F. 1991. Characterization of the DNF15S2 locus on human chromosome 3: identification of a gene coding for four kringle domains with homology to hepatocyte growth factor. Biochemistry 30: 9768-9780.

2. Bezerra, J.A., Han, S., Danton, M.J.S. and Degen, S.J.F. 1993. Are hepatocyte growth factor-like protein and macrophage stimulating protein the same protein? Protein Sci. 2: 666-668.

3. Miyazawa, K., Shimomura, T., Naka, D. and Kitamura, N. 1994. Proteolytic activation of hepatocyte growth factor in response to tissue injury. J. Biol. Chem. 269: 8966-8970.

4. Donate, L.E., Gherardi, E., Srinivasan, N., Sowdhamini, R., Aparicio, S. and Blundell, T.L. 1994. Molecular evolution and domain stucture of plasminogen-related growth factors (HGF/SF and HGF1/MSP). Protein Sci. 3: 2378-2394.

5. Gaudino, G., Follenzi, A., Naldini, L., Collesi, C., Santoro, M., Gallo, K.A., Godowski, P.J. and Comoglio, P.M. 1994. RON is a heterodimeric tyrosine kinase receptor activated by the HGF homologue MSP. EMBO J. 13: 3524-3532.

6. Niranjan, B., Buluwela, L., Yant, J., Perusinghe, N., Atherton, A., Phippard, D., Dale, T., Gusterson, B. and Kamalati, T. 1995. HGF/SF: a potent cytokine for mammary growth, morphogenesis and development. Development 121: 2897-2908.

7. Naldini, L., Vigna, E., Bardelli, A., Follenzi, A., Galimi, F. and Comoglio, P.M. 1995. Biological activation of pro-HGF (hepatocyte growth factor) by urokinase is controlled by a stoichiometric reaction. J. Biol. Chem. 270: 603-611.

8. Tuck, A.B., Park, M., Sterns, E.E., Boag, A. and Elliott, B.E. 1996. Coexpression of hepatocyte growth factor and receptor (Met) in human breast carcinoma. Am. J. Pathol. 148: 225-232.

9. Waltz, S.E., McDowell, S.A., Muraoka, R.S., Air, E.L., Flick, L.M., Chen, Y.Q., Wang, M.H. and Degen, S.J. 1997. Functional characterization of domains contained in hepatocyte growth factor-like protein. J. Biol. Chem. 272: 30526-30537.

CHROMOSOMAL LOCATION

Genetic locus: MST1 (human) mapping to 3p21.31.

SOURCE

HGFL β (49R12) is a mouse monoclonal antibody raised against full length recombinant HGFL β of human origin.

PRODUCT

Each vial contains 100 µg IgG$_{2b}$ in 1.0 ml PBS with < 0.1% sodium azide and protein stabilizer. Also available azide-free for neutralization, sc-80039 L, 100 µg/0.1 ml.

APPLICATIONS

HGFL β (49R12) is recommended for detection of HGFL β of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with HGFL.

Suitable for use as control antibody for HGFL siRNA (h): sc-39570, HGFL shRNA Plasmid (h): sc-39570-SH and HGFL shRNA (h) Lentiviral Particles: sc-39570-V.

Molecular Weight of HGFL: 80 kDa.

Molecular Weight of HGFL α chain: 53 kDa.

Molecular Weight of HGFL β chain: 30 kDa.

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.

PROTOCOLS

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