SANTA CRUZ BIOTECHNOLOGY, INC.

HCCR-1 (H-100): sc-366177

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

HCCR-1 (human cervical cancer oncogene 1), also known as HCCR-2 or LETMD1, is a 360 amino acid single-pass membrane protein that is expressed in the kidney, liver, skeletal muscle, heart and brain. It is suggested that HCCR-1 may be involved in tumorigenesis and may function as a negative regulator of the p53 tumor suppressor. Overexpression of HCCR-1 may cause mitochondrial dysfunction that can lead to UVC or staurosporine-induced apoptosis resistance and progression of tumor formation. HCCR-1 is considered a candidate biomarker for breast cancer. Various human tumors including leukemia, lymphoma, and carcinomas of the breast, kidney, ovary, stomach, colon, and uterine cervix have high levels of HCCR-1. Six isoforms exist due to alternative splicing events.

REFERENCES

1. Ko, J., Lee, Y.H., Hwang, S.Y., Lee, Y.S., Shin, S.M., Hwang, J.H., Kim, J., Kim, Y.W., Jang, S.W., Ryoo, Z.Y., Kim, I.K., Namkoong, S.E. and Kim, J.W. 2003. Identification and differential expression of novel human cervical cancer oncogene HCCR-2 in human cancers and its involvement in p53 stabilization. Oncogene 22: 4679-4689.
2. Ko, J., Shin, S.M., Oh, Y.M., Lee, Y.S., Ryoo, Z.Y., Lee, Y.H., Na, D.S. and Kim, J.W. 2004. Transgenic mouse model for breast cancer: induction of breast cancer in novel oncogene HCCR-2 transgenic mice. Oncogene 23: 1950-1953.
3. Jung, S.S., Park, H.S., Lee, I.J., Namkoong, H., Shin, S.M., Cho, G.W., Ha, S.A., Park, Y.G., Lee, Y.S., Ko, J. and Kim, J.W. 2005. The HCCR oncoprotein as a biomarker for human breast cancer. Clin. Cancer Res. 11: 7700-7708.
4. Cho, G.W., Shin, S.M., Namkoong, H., Kim, H.K., Ha, S.A., Hur, S.Y., Kim, T.E., Chai, Y.G. and Kim, J.W. 2006. The phosphatidylinositol 3-kinase/Akt pathway regulates the HCCR-1 oncogene expression. Gene 384: 18-26.
5. Cho, G.W., Shin, S.M., Kim, H.K., Ha, S.A., Kim, S., Yoon, J.H., Hur, S.Y., Kim, T.E. and Kim, J.W. 2007. HCCR-1, a novel oncogene, encodes a mitochondrial outer membrane protein and suppresses the UVC-induced apoptosis. BMC Cell Biol. 8: 50.
6. Yang, Y., Zhang, G.X., Shi, R.H., Lin, Y., Hao, B., Wang, X.Y., Wang, H.D. and Huang, Z.H. 2007. Overexpression of HCCR in hepatocellular carcinoma cells and its clinical significance. Zhonghua Gan Zang Bing Za Zhi 15: 223-224.

CHROMOSOMAL LOCATION

Genetic locus: LETMD1 (human) mapping to 12q13.12; Letmd1 (mouse) mapping to 15 F1.

SOURCE

HCCR-1 (H-100) is a rabbit polyclonal antibody raised against amino acids 261-360 mapping at the C-terminus of HCCR-1 of human origin.

PRODUCT

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

APPLICATIONS

HCCR-1 (H-100) is recommended for detection of HCCR-1 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).

HCCR-1 (H-100) is also recommended for detection of HCCR-1 in additional species, including canine and bovine.

Suitable for use as control antibody for HCCR-1 siRNA (h): sc-95839, HCCR-1 siRNA (m): sc-145903, HCCR-1 shRNA Plasmid (h): sc-95839-SH, HCCR-1 shRNA Plasmid (m): sc-145903-SH, HCCR-1 shRNA (h) Lentiviral Particles: sc-95839-V and HCCR-1 shRNA (m) Lentiviral Particles: sc-145903-V.

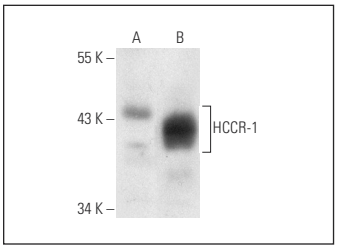
Molecular Weight of HCCR-1: 39 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203 or A549 cell lysate: sc-2413.

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 A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 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.

DATA



HCCR-1 (H-100): sc-366177. Western blot analysis of HCCR-1 expression in K-562 (**A**) and A549 (**B**) whole cell lysates.

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.