

# HCCR-1 (Q-15): sc-161697

## 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, consist of high levels of HCCR-1. Six isoforms exist due to alternative splicing events.

## REFERENCES

1. Ko, J., et al. 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., et al. 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., et al. 2005. The HCCR oncoprotein as a biomarker for human breast cancer. *Clin. Cancer Res.* 11: 7700-7708.
4. Cho, G.W., et al. 2006. The phosphatidylinositol 3-kinase/Akt pathway regulates the HCCR-1 oncogene expression. *Gene* 384: 18-26.
5. Cho, G.W., et al. 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., et al. 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 (Q-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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.

Blocking peptide available for competition studies, sc-161697 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

HCCR-1 (Q-15) 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 (Q-15) is also recommended for detection of HCCR-1 in additional species, including equine, 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.

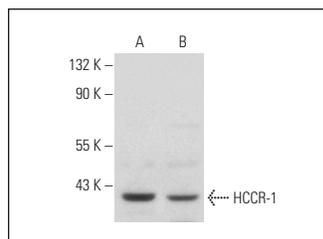
Molecular Weight of HCCR-1: 39 kDa.

Positive Controls: T-47D cell lysate: sc-2293 or SK-BR-3 cell lysate: sc-2218.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



HCCR-1 (Q-15): sc-161697. Western blot analysis of HCCR-1 expression in SKBR-3 (A) and T-47D (B) whole cell lysates.

## 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) or our catalog for detailed protocols and support products.