

JK-1 (L-14): sc-131956

BACKGROUND

Esophageal squamous cell carcinoma (ESCC) is cancer of the flat cells lining the esophagus, and is currently the ninth most frequent cancer in the world. While environmental risk factors, such as alcohol drinking and cigarette smoking, increase chances of ESCC, several genes are believed to be involved in the origin and/or progression of ESCC. The proteins encoded by these genes include p53, DCC, DEC1, DLEC1, p16 and TGF β RII. JK-1, also known as FAM134B, is a 497 amino acid multi-pass membrane protein. JK-1 overexpression in ESCC cell lines causes increased cell growth rate, indicating a possible role in ESCC progression. JK-1 is expressed as two isoforms produced by alternative splicing.

REFERENCES

- Jiang, W., Kahn, S.M., Tomita, N., Zhang, Y.J., Lu, S.H. and Weinstein, I.B. 1992. Amplification and expression of the human cyclin D gene in esophageal cancer. *Cancer Res.* 52: 2980-2983.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 133239. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Tang, W.K., Chui, C.H., Fatima, S., Kok, S.H., Pak, K.C., Ou, T.M., Hui, K.S., Wong, M.M., Wong, J., Law, S., Tsao, S.W., Lam, K.Y., Beh, P.S., Srivastava, G., Chan, A.S., Ho, K.P. and Tang, J.C. 2007. Oncogenic properties of a novel gene JK-1 located in chromosome 5p and its overexpression in human esophageal squamous cell carcinoma. *Int. J. Mol. Med.* 19: 915-923.
- Hoshino, I., Matsubara, H., Akutsu, Y., Nishimori, T., Yoneyama, Y., Murakami, K., Sakata, H., Matsushita, K., Komatsu, A., Brooks, R. and Ochiai, T. 2008. Role of histone deacetylase inhibitor in adenovirus-mediated p53 gene therapy in esophageal cancer. *Anticancer Res.* 28: 665-671.
- Cummings, L.C. and Cooper, G.S. 2008. Descriptive epidemiology of esophageal carcinoma in the Ohio Cancer Registry. *Cancer Detect. Prev.* 32: 87-92.
- Fan, Y.J., Song, X., Li, J.L., Li, X.M., Liu, B., Wang, R., Fan, Z.M. and Wang, L.D. 2008. Esophageal and gastric cardia cancers on 4238 Chinese patients residing in municipal and rural regions: A histopathological comparison during 24-year period. *World J. Surg.* 32: 1980-1988.
- Lyronis, I.D., Baritaki, S., Bizakis, I., Krambovitis, E. and Spandidos, D.A. 2008. K-Ras mutation, HPV infection and smoking or alcohol abuse positively correlate with esophageal squamous carcinoma. *Pathol. Oncol. Res.* 14: 267-273.

CHROMOSOMAL LOCATION

Genetic locus: FAM134B (human) mapping to 5p15.1; Fam134b (mouse) mapping to 15 B1.

SOURCE

JK-1 (L-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of JK-1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-131956 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

JK-1 (L-14) is recommended for detection of JK-1 isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other JK family members.

JK-1 (L-14) is also recommended for detection of JK-1 isoforms 1 and 2 in additional species, including equine and canine.

Suitable for use as control antibody for JK-1 siRNA (h): sc-92031, JK-1 siRNA (m): sc-108551, JK-1 shRNA Plasmid (h): sc-92031-SH, JK-1 shRNA Plasmid (m): sc-108551-SH, JK-1 shRNA (h) Lentiviral Particles: sc-92031-V and JK-1 shRNA (m) Lentiviral Particles: sc-108551-V.

Molecular Weight of JK-1: 55 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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) 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.

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 or our catalog for detailed protocols and support products.