

# EF-1 $\gamma$ (h2): 293T Lysate: sc-114807

## BACKGROUND

EF-1 (elongation factor-1) is a multi-protein complex that is responsible for the delivery of aminoacyl-tRNAs to the ribosome. EF-1  $\gamma$  (elongation factor-1  $\gamma$ ), also known as EEF1G or GIG35, is a 437 amino acid subunit of the EF-1 complex. Expressed in stomach, pancreas, brain, lung, kidney, intestine, liver and spleen, EF-1  $\gamma$  contains an N-terminal glutathione transferase domain which is thought to be involved in anchoring the complex to various cellular components. Additionally, EF-1  $\gamma$  may play a key role in the assembly of multiprotein complexes containing aminoacyl-tRNA synthetases. Increased expression of EF-1  $\gamma$  is associated with pancreatic cancer, suggesting a possible role for EF-1  $\gamma$  in the oncogenic transformation process.

## REFERENCES

1. Sanders, J., Maassen, J.A. and Möller, W. 1992. Elongation factor-1 messenger-RNA levels in cultured cells are high compared to tissue and are not drastically affected further by oncogenic transformation. *Nucleic Acids Res.* 20: 5907-5910.
2. Lew, Y., Jones, D.V., Mars, W.M., Evans, D., Byrd, D. and Frazier, M.L. 1992. Expression of elongation factor-1  $\gamma$ -related sequence in human pancreatic cancer. *Pancreas* 7: 144-152.
3. Koonin, E.V., Mushegian, A.R., Tatusov, R.L., Altschul, S.F., Bryant, S.H., Bork, P. and Valencia, A. 1994. Eukaryotic translation elongation factor 1  $\gamma$  contains a glutathione transferase domain—study of a diverse, ancient protein superfamily using motif search and structural modeling. *Protein Sci.* 3: 2045-2054.
4. Wang, C.C., Kadota, M., Nishigaki, R., Kazuki, Y., Shirayoshi, Y., Rogers, M.S., Gojobori, T., Ikeo, K. and Oshimura, M. 2004. Molecular hierarchy in neurons differentiated from mouse ES cells containing a single human chromosome 21. *Biochem. Biophys. Res. Commun.* 314: 335-350.
5. Yoon, S.Y., Kim, J.M., Oh, J.H., Jeon, Y.J., Lee, D.S., Kim, J.H., Choi, J.Y., Ahn, B.M., Kim, S., Yoo, H.S., Kim, Y.S. and Kim, N.S. 2006. Gene expression profiling of human HBV- and/or HCV-associated hepatocellular carcinoma cells using expressed sequence tags. *Int. J. Oncol.* 29: 315-327.
6. Corcoran, D., Rizos, D., Fair, T., Evans, A.C. and Lonergan, P. 2007. Temporal expression of transcripts related to embryo quality in bovine embryos cultured from the two-cell to blastocyst stage *in vitro* or *in vivo*. *Mol. Reprod. Dev.* 74: 972-977.

## CHROMOSOMAL LOCATION

Genetic locus: EEF1G (human) mapping to 11q12.3.

## PRODUCT

EF-1  $\gamma$  (h2): 293T Lysate represents a lysate of human EF-1  $\gamma$  transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## APPLICATIONS

EF-1  $\gamma$  (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive EF-1  $\gamma$  antibodies. Recommended use: 10-20  $\mu$ l per lane.

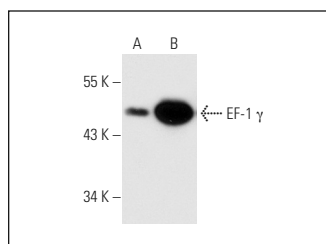
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

EF-1  $\gamma$  (X5-P): sc-101035 is recommended as a positive control antibody for Western Blot analysis of enhanced human EF-1  $\gamma$  expression in EF-1  $\gamma$  transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



EF-1  $\gamma$  (X5-P): sc-101035. Western blot analysis of EF-1  $\gamma$  expression in non-transfected: sc-117752 (A) and human EF-1  $\gamma$  transfected: sc-114807 (B) 293T 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) for detailed protocols and support products.