

IER5 (S-13): sc-162957

BACKGROUND

IER5 (immediate early response 5), also known as SBBI48, is a 327 amino acid protein belonging to the immediate early response (IER) family of proteins. IER proteins are the first gene products to be induced during growth stimulation and/or arrest. Considered an early transcription factor, IER5 may be involved in mediating PSP (proteins and peptide bound polysaccharides)-induced apoptosis in HL-60 cells. PSP extracted from Basidiomycetous fungi are widely used in cancer immunotherapy and suggested to induce apoptosis in cancer cells *in vitro*. The gene encoding IER5 is located on human chromosome 1, which houses over 3,000 genes and is the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome.

REFERENCES

- Williams, M., Lyu, M.S., Yang, Y.L., Lin, E.P., Dunbrack, R., Birren, B., Cunningham, J. and Hunter, K. 1999. IER5, a novel member of the slow-kinetics immediate-early genes. *Genomics* 55: 327-334.
- Cirelli, C. and Tononi, G. 2000. Gene expression in the brain across the sleep-waking cycle. *Brain Res.* 885: 303-321.
- Göttgens, B., Barton, L.M., Chapman, M.A., Sinclair, A.M., Knudsen, B., Grafham, D., Gilbert, J.G., Rogers, J., Bentley, D.R. and Green, A.R. 2002. Transcriptional regulation of the stem cell leukemia gene (SCL)—comparative analysis of five vertebrate SCL loci. *Genome Res.* 12: 749-759.
- Okada, A., Kushima, K., Aoki, Y., Bialer, M. and Fujiwara, M. 2005. Identification of early-responsive genes correlated to valproic acid-induced neural tube defects in mice. *Birth Defects Res. Part A Clin. Mol. Teratol.* 73: 229-238.
- Zeng, F., Hon, C.C., Sit, W.H., Chow, K.Y., Hui, R.K., Law, I.K., Ng, V.W., Yang, X.T., Leung, F.C. and Wan, J.M. 2005. Molecular characterization of *Corioliolus versicolor* PSP-induced apoptosis in human promyelotic leukemic HL-60 cells using cDNA microarray. *Int. J. Oncol.* 27: 513-523.
- Kis, E., Szatmári, T., Keszei, M., Farkas, R., Esik, O., Lumniczky, K., Falus, A. and Sáfrány, G. 2006. Microarray analysis of radiation response genes in primary human fibroblasts. *Int. J. Radiat. Oncol. Biol. Phys.* 66: 1506-1514.
- Ding, K.K., Shang, Z.F., Hao, C., Xu, Q.Z., Shen, J.J., Yang, C.J., Xie, Y.H., Qiao, C., Wang, Y., Xu, L.L. and Zhou, P.K. 2009. Induced expression of the IER5 gene by gamma-ray irradiation and its involvement in cell cycle checkpoint control and survival. *Radiat. Environ. Biophys.* 48: 205-213.

CHROMOSOMAL LOCATION

Genetic locus: IER5 (human) mapping to 1q25.3; *ler5* (mouse) mapping to 1 G3.

SOURCE

IER5 (S-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of IER5 of human origin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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-162957 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IER5 (S-13) is recommended for detection of IER5 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 IER family members.

IER5 (S-13) is also recommended for detection of IER5 in additional species, including bovine.

Suitable for use as control antibody for IER5 siRNA (h): sc-88172, IER5 siRNA (m): sc-146146, IER5 shRNA Plasmid (h): sc-88172-SH, IER5 shRNA Plasmid (m): sc-146146-SH, IER5 shRNA (h) Lentiviral Particles: sc-88172-V and IER5 shRNA (m) Lentiviral Particles: sc-146146-V.

Molecular Weight of IER5: 34 kDa.

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.

PROTOCOLS

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