

IEX-1 (C-20): sc-8454

BACKGROUND

Tumors are frequently observed as resistant to apoptotic induction by FAS, tumor necrosis factor α (TNF- α) or irradiation. This anti-death activity may be attributed to immediate early-response genes that are regulated at the transcriptional level, including the protein IEX-1. IEX-1 (immediately early gene X-1), also known as IER3 (immediate early response 3), DIF-2 (differentiation-dependent gene 2 protein), immediate early protein GLY96 or PRG1 (PACAP-responsive gene 1 protein), is a 156 amino acid single-pass type II membrane protein that belongs to the IER3 family. IEX-1 was originally characterized as a gene induced by ultraviolet radiation and TNF- α , which protected human squamous carcinoma cells from apoptosis. Subsequent transfection studies have also shown that expression of IEX-1 in human keratinocytes and mouse fibroblasts results in more rapid proliferation of the cells as compared with controls. The promoter region of IEX-1 contains binding motifs for both NF κ B and p53, suggesting that these proteins may regulate its expression.

REFERENCES

1. Beyaert, R., et al. 1994. Molecular mechanisms of tumor necrosis factor-induced cytotoxicity. What we do understand and what we do not. *FEBS Lett.* 340: 9-16.
2. Kondratyev, A.D., et al. 1996. Identification and characterization of a radiation-inducible glycosylated human early-response gene. *Cancer Res.* 56: 1498-1502.
3. Wu, M.X., et al. 1998. IEX-1L, an apoptosis inhibitor involved in NF κ B-mediated cell survival. *Science* 281: 998-1001.
4. Kumar, R., et al. 1998. A novel immediate early response gene, IEX-1, is induced by ultraviolet radiation in human keratinocytes. *Biochem. Biophys. Res. Commun.* 253: 336-341.
5. Schafer, H., et al. 1998. The promoter of human p22/PACAP response gene 1 (PRG1) contains functional binding sites for the p53 tumor suppressor and for NF κ B. *FEBS Lett.* 436: 139-143.

CHROMOSOMAL LOCATION

Genetic locus: IER3 (human) mapping to 6p21.33.

SOURCE

IEX-1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of IEX-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-8454 P, (100 μ g 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

IEX-1 (C-20) is recommended for detection of IEX-1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

IEX-1 (C-20) is also recommended for detection of IEX-1 in additional species, including equine, canine, bovine and porcine.

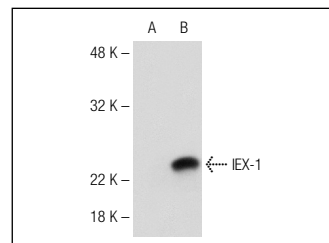
Suitable for use as control antibody for IEX-1 siRNA (h): sc-43859, IEX-1 shRNA Plasmid (h): sc-43859-SH and IEX-1 shRNA (h) Lentiviral Particles: sc-43859-V.

Molecular Weight (predicted) of IEX-1: 17 kDa.

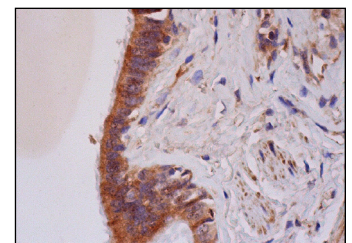
Molecular Weight (observed) of IEX-1: 23 kDa.

Positive Controls: IEX-1 (h): 293T Lysate: sc-110039 or C32 whole cell lysate: sc-2205.

DATA



IEX-1 (C-20): sc-8454. Western blot analysis of IEX-1 expression in non-transfected: sc-117752 (A) and human IEX-1 transfected: sc-110039 (B) 293T whole cell lysates.



IEX-1 (C-20): sc-8454. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bronchus tissue showing cytoplasmic staining of respiratory epithelial cells.

SELECT PRODUCT CITATIONS

1. Arlt, A., et al. 2004. The expression of immediate early gene X-1 (IEX-1) is differentially induced by retinoic acids in NB4 and KG1 cells: possible implication in the distinct phenotype of retinoic acid-responsive and -resistant leukemic cells. *Leukemia* 18: 1646-1655.
2. Gonzalez, S., et al. 2005. p73 β -Mediated apoptosis requires p57^{kip2} induction and IEX-1 inhibition. *Cancer Res.* 65: 2186-2192.
3. Kruse, M.L. 2005. Immediate early gene X1 (IEX-1) is organized in subnuclear structures and partially colocalizes with promyelocytic leukemia protein in HeLa cells. *J. Biol. Chem.* 280: 24849-24856.
4. Prall, W.C., et al. 2009. Differential gene expression of bone marrow-derived CD34⁺ cells is associated with survival of patients suffering from myelodysplastic syndrome. *Int. J. Hematol.* 89: 173-187.

RESEARCH USE

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