

# IEX-1 (N-17): sc-8453

## BACKGROUND

Tumors are frequently observed as resistant to apoptotic induction by FAS, tumor necrosis factor  $\alpha$  (TNF- $\alpha$ ) 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- $\alpha$ , 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 $\kappa$ 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 $\kappa$ 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 $\kappa$ B. *FEBS Lett.* 436: 139-143.

## CHROMOSOMAL LOCATION

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

## SOURCE

IEX-1 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of IEX-1 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-8453 P, (100  $\mu$ 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 (N-17) 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  $\mu$ g per 100-500  $\mu$ g 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).

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.

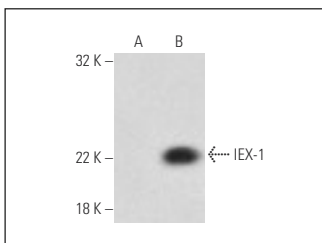
Molecular Weight (observed) of IEX-1: 23 kDa.

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

## 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



IEX-1 (N-17): sc-8453. 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.

## SELECT PRODUCT CITATIONS

1. Osawa, Y., et al. 2003. Expression of the NF $\kappa$ B target gene X-ray-inducible immediate early response factor-1 short enhances TNF $\alpha$ -induced hepatocyte apoptosis by inhibiting Akt activation. *J. Immunol.* 170: 4053-4060.
2. Yoon, S., et al. 2009. IEX-1-induced cell death requires BIM and is modulated by MCL-1. *Biochem. Biophys. Res. Commun.* 382: 400-404.

## RESEARCH USE

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