SANTA CRUZ BIOTECHNOLOGY, INC.

IK (G-13): sc-135485

BACKGROUND

IK (IK cytokine, down-regulator of HLA II), also known as RED or RER, is a 557 amino acid protein belongs to the RED family. IK and it's murine homologue MuRED share 98% sequence identity at the amino acid level. IK is ubiquitously expressed and may bind to chromatin. The IK protein localizes to discrete dots within the nucleus, excluding the nucleolus. The characteristics of IK and its nuclear localization implicate it as a regulatory protein, possibly involved in transcription. It has also been suggested that the IK molecule participates in the regulation of HLA-DR expression on hematopoietic cells and plays a role in growth factor-dependent $CD34^+$ cell proliferation and differentiation by modulating HLA-DR expression. The IK gene is conserved in canine, bovine, mouse, rat, chicken, zebrafish, fruit fly, mosquito and *C. elegans*, and maps to human chromosome 5q31.3. The region between 5q31.2 and 5q31.3 has been correlated with human dilated cardiomyopathy (DCM).

REFERENCES

1. Krief, P., et al. 1994. A new cytokine (IK) down-regulating HLA class II: monoclonal antibodies, cloning and chromosome localization. Oncogene 9: 3449-3456.
2. Cao, L.X., et al. 1997. Implication of a new molecule IK in $CD34^+$ hematopoietic progenitor cell proliferation and differentiation. Blood 89: 3615-3623.
3. Assier, E., et al. 1999. Isolation, sequencing and expression of RED, a novel human gene encoding an acidic-basic dipeptide repeat. Gene 230: 145-154.
4. Willers, J., et al. 2001. The interferon inhibiting cytokine IK is overexpressed in cutaneous T cell lymphoma derived tumor cells that fail to upregulate major histocompatibility complex class II upon interferon-γ stimulation. J. Invest. Dermatol. 116: 874-879.
5. Schmutz, J., et al. 2004. The DNA sequence and comparative analysis of human chromosome 5. Nature 431: 268-274.
6. Friedrichs, F., et al. 2009. HBEGF, SRA1, and IK: three cosegregating genes as determinants of cardiomyopathy. Genome Res. 19: 395-403.

CHROMOSOMAL LOCATION

Genetic locus: IK (human) mapping to 5q31.3; Ik (mouse) mapping to 18 B2.

SOURCE

IK (G-13) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of IK of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-135485 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

IK (G-13) is recommended for detection of IK of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

IK (G-13) is also recommended for detection of IK in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for IK siRNA (h): sc-91691, IK siRNA (m): sc-146198, IK shRNA Plasmid (h): sc-91691-SH, IK shRNA Plasmid (m): sc-146198-SH, IK shRNA (h) Lentiviral Particles: sc-91691-V and IK shRNA (m) Lentiviral Particles: sc-146198-V.

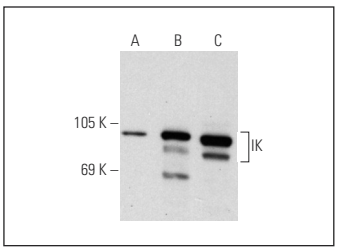
Molecular Weight of IK: 66 kDa.

Positive Controls: IK (m5): 293T Lysate: sc-121026 or K-562 whole cell lysate: sc-2203.

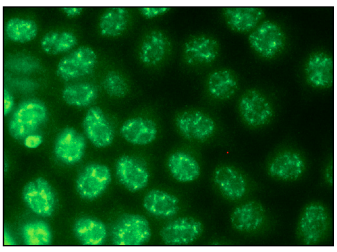
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



IK (G-13): sc-135485. Western blot analysis of IK expression in non-transfected 293T: sc-117752 (**A**), mouse IK transfected 293T: sc-121026 (**B**) and K-562 (**C**) whole cell lysates.



IK (G-13): sc-135485. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

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.