

DEK (2): sc-136222

BACKGROUND

The mammalian nuclear phosphoprotein DEK is implicated in multiple cellular processes, including transcriptional regulation, mRNA processing, and chromatin remodeling, and is associated with a number of clinical autoimmune and neoplastic conditions. DEK, an abundant chromatin-associated protein, changes the topology of DNA in chromatin *in vitro*. Although first identified in a fusion with the CAN/Nup214 nucleoporin protein in a specific subtype of acute myelogenous leukemia, DEK is also an autoantigen in patients with Pauciarticular onset juvenile rheumatoid arthritis. Furthermore, the last 65 amino acids of DEK can partially reverse the mutation-prone phenotype of cells from patients with ataxia-telangiectasia. The human DEK gene maps to chromosome 6p22.3.

REFERENCES

1. Fu, G.K., et al. 1997. DEK, an autoantigen involved in a chromosomal translocation in acute myelogenous leukemia, binds to the HIV-2 enhancer. *Proc. Natl. Acad. Sci. USA* 94: 1811-1815.
2. McGarvey, T., et al. 2000. The acute myeloid leukemia-associated protein, DEK, forms a splicing-dependent interaction with exon-product complexes. *J. Cell Biol.* 150: 309-320.
3. Kappes, F., et al. 2001. Subcellular localization of the human proto-oncogene protein DEK. *J. Biol. Chem.* 276: 26317-26323.

CHROMOSOMAL LOCATION

Genetic locus: DEK (human) mapping to 6p22.3; Dek (mouse) mapping to 13 A5.

SOURCE

DEK (2) is a mouse monoclonal antibody raised against amino acids 19-169 of DEK of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

DEK (2) is recommended for detection of DEK of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for DEK siRNA (h): sc-38253, DEK siRNA (m): sc-44982, DEK shRNA Plasmid (h): sc-38253-SH, DEK shRNA Plasmid (m): sc-44982-SH, DEK shRNA (h) Lentiviral Particles: sc-38253-V and DEK shRNA (m) Lentiviral Particles: sc-44982-V.

Molecular Weight of DEK: 43-45 kDa.

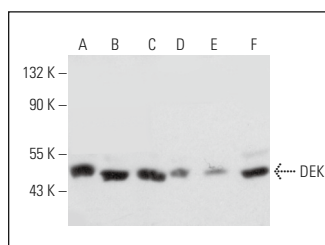
Positive Controls: K-562 nuclear extract: sc-2130, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SUPPORT REAGENTS

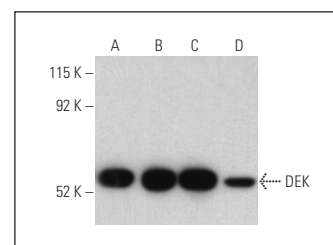
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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.
- 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



DEK (2): sc-136222. Western blot analysis of DEK expression in HeLa (A) and MDA-MB-231 (B) whole cell lysates and K-562 (C), RAW 264.7 (D), NIH/3T3 (E) and KNRK (F) nuclear extracts.



DEK (2): sc-136222. Western blot analysis of DEK expression in KNRK nuclear extract (A) and Jurkat (B), U-698-M (C) and U-251-MG (D) whole cell lysates. Detection reagent used: m-IgG₁ BP-HRP: sc-525408.

SELECT PRODUCT CITATIONS

1. Ivanauskienė, K., et al. 2014. The PML-associated protein DEK regulates the balance of H3.3 loading on chromatin and is important for telomere integrity. *Genome Res.* 24: 1584-1594.
2. Bondy-Chorney, E., et al. 2020. A broad response to intracellular long-chain polyphosphate in human cells. *Cell Rep.* 33: 108318.
3. Duan, L., et al. 2022. Nuclear RNA binding regulates TDP-43 nuclear localization and passive nuclear export. *Cell Rep.* 40: 111106.
4. Pierzynska-Mach, A., et al. 2023. Imaging-based study demonstrates how the DEK nanoscale distribution differentially correlates with epigenetic marks in a breast cancer model. *Sci. Rep.* 13: 12749.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

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