

**DEK (E4S5J) Rabbit mAb**

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IHC-P	H M R Mk	Endogenous	50	Rabbit IgG	#P35659	7913

**Product Usage Information****Application**

Western Blotting  
Immunohistochemistry (Paraffin)

**Dilution**

1:1000  
1:150 - 1:600

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

DEK (E4S5J) Rabbit mAb recognizes endogenous levels of total DEK protein. Non-specific staining has been observed by IHC in nerve cells.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human DEK protein.

**Background**

The protein product of the DEK oncogene is a nuclear phosphoprotein that is highly conserved among higher eukaryotic organisms and preferentially expressed in actively proliferating and/or malignant cells (1,2). DEK is an abundant, non-histone chromosomal protein that establishes and maintains heterochromatin by interacting with HP1a, enhancing HP1a binding to tri-methyl histone H3 Lys9 and stabilizing local tri-methyl histone H3 Lys9 levels (3). DEK localized to euchromatin represses transcription by interacting with transcription factors such as RelA/p65 (4). The DEK protein also associates with mRNA processing factors to regulate splicing and nuclear export (5,6).

The DEK proto-oncogene functions as a negative regulator of cellular differentiation, senescence, and apoptosis. DEK is translocated and/or over-expressed in a number of different cancers, including acute myeloid leukemia, breast cancer, cervical cancer, hepatocellular carcinoma, melanoma, and small cell lung cancer (1,2). In addition to the role of DEK in cancer biology, which is mainly related to its intracellular functions, extracellular DEK is implicated in the pathogenesis of autoimmune disorders (1,2). Circulating autoantibodies to DEK have been identified in the serum of patients with autoimmune diseases, including juvenile idiopathic arthritis, sarcoidosis, and systemic lupus erythematosus. DEK is secreted by human monocyte-derived macrophages and apoptotic T-lymphocytes and can act as a chemotactic, pro-inflammatory factor (7,8). Exogenous DEK can penetrate neighboring cells, and translocate to the nucleus to carry out its endogenous nuclear functions (9). IL-8 induced secretion of DEK from macrophages serves as a chemoattractant for peripheral blood leukocytes (7).

**Background References**

1. Broxmeyer, H.E. et al. (2013) *Stem Cells* 31, 1447-53.
2. Riveiro-Falkenbach, E. and Soengas, M.S. (2010) *Clin Cancer Res* 16, 2932-8.
3. Kappes, F. et al. (2011) *Genes Dev* 25, 673-8.
4. Sammons, M. et al. (2006) *J Biol Chem* 281, 26802-12.
5. McGarvey, T. et al. (2000) *J Cell Biol* 150, 309-20.
6. Soares, L.M. et al. (2006) *Science* 312, 1961-5.
7. Mor-Vaknin, N. et al. (2006) *Mol Cell Biol* 26, 9484-96.
8. Kappes, F. et al. (2008) *Mol Cell Biol* 28, 3245-57.
9. Saha, A.K. et al. (2013) *Proc Natl Acad Sci U S A* 110, 6847-52.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting **IHC-P:** Immunohistochemistry (Paraffin)

**Cross-Reactivity Key**

**H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey

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