

For Research Use Only

NEK1 Recombinant monoclonal antibody

Catalog Number:86224-2-RR



Basic Information

Catalog Number: 86224-2-RR	GenBank Accession Number: BC114491	Purification Method: Protein A purification
Size: 100ul , Concentration: 1000 ug/ml by Nanodrop;	GeneID (NCBI): 4750	CloneNo.: 250128H7
Source: Rabbit	UNIPROT ID: Q96PY6	Recommended Dilutions: WB: 1:5000-1:50000 IF/ICC: 1:250-1:1000
Isotype: IgG	Full Name: NIMA (never in mitosis gene a)-related kinase 1	
Immunogen Catalog Number: AG25970	Calculated MW: 1258 aa, 143 kDa	
	Observed MW: 170-180 kDa	

Applications

Tested Applications:
WB, IF/ICC, ELISA

Species Specificity:
human, mouse, rat

Positive Controls:
WB : HeLa cells, mouse testis tissue, HEK-293T cells, K-562 cells, PC-12 cells, rat testis tissue
IF/ICC : Starvation treated hTERT-RPE1 cells,

Background Information

NEK1 (NIMA-Related Kinase 1) is a serine/threonine-protein kinase that plays a multifaceted and critical role in cellular homeostasis. It is widely expressed and involved in key biological processes, most notably the DNA Damage Response (DDR) and cilium assembly and function. NEK1 kinase activity is regulated in response to genotoxic stress, where it facilitates the repair of double-strand breaks alongside proteins like ATM and ATR. Simultaneously, it localizes to the basal body of the primary cilium, governing ciliary structure and trafficking. The paramount importance of NEK1 is highlighted by its strong genetic association with Amyotrophic Lateral Sclerosis (ALS); loss-of-function mutations in NEK1 are recognized as one of the most common genetic causes of familial and sporadic ALS. Furthermore, biallelic mutations in NEK1 are responsible for the severe ciliopathy known as short-rib thoracic dysplasia, underscoring its vital role in skeletal development. Thus, NEK1 represents a crucial molecule at the crossroads of genome integrity, ciliary function, and human neurodegenerative and developmental diseases.

Storage

Storage:
Store at -20°C. Stable for one year after shipment.

Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol, pH7.3

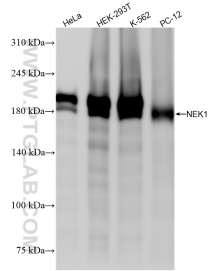
Aliquoting is unnecessary for -20°C storage

*** 20ul sizes contain 0.1% BSA

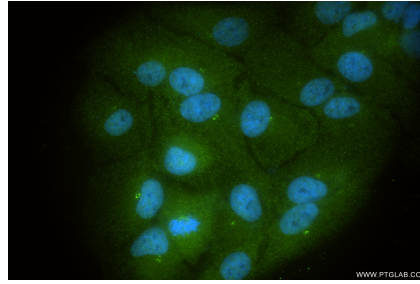
For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA) E: proteintech@ptglab.com W: ptglab.com

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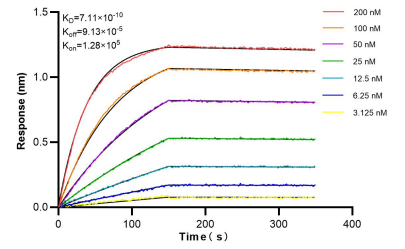
Selected Validation Data



Various lysates were subjected to SDS PAGE followed by western blot with 86224-2-RR (NEK1 antibody) at dilution of 1:21000 incubated at room temperature for 1.5 hours.



Immunofluorescent analysis of (4% PFA) fixed Starvation treated hTERT-RPE1 cells using NEK1 antibody (86224-2-RR, Clone: 250128H7) at dilution of 1:500 and CoraLite@488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2).



Bi-layer interferometry (BLI) kinetic assays of 86224-2-RR against Human NEK1 were performed. The affinity constant is 0.711 nM.