Revision 1

#61122 Store at -20C

PBEF/NAMPT (D1K6D) Rabbit mAb

Cell Signaling TECHNOLOGY®

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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:
WB, IP	H	Endogenous	52	Rabbit IgG	#P43490	10135

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:200

Storage

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

Specificity / Sensitivity

PBEF/NAMPT (D1K6D) Rabbit mAb recognizes endogenous levels of total PBEF/NAMPT protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly122 of human PBEF/NAMPT protein.

Background

Nicotinamide phosphoribosyltransferase (NAMPT; also known as Pre-B cell-enhancing factor PBEF) catalyzes the synthesis of nicotinamide mononucleotide (NMN) from nicotinamide and 5-phosphoribosylpyrophosphate (PRPP), the rate-limiting step in the NAD biosynthesis pathway starting from nicotinamide (1,2). NAD biosynthesis mediated by NAMPT plays a critical role in glucose-stimulated insulin secretion in pancreatic beta cells (3). Both NAMPT inhibitors and activators have been sought for clinical applications (4,5). NAMPT has intra- and extracellular forms (iNAMPT and eNAMPT), and deacetylation of iNAMPT by SIRT1 promotes eNAMPT secretion through a nonclassical secretory pathway (3,6). eNAMPT, independent of its enzymatic activity, can induce epithelial-to-mesenchymal transition in mammary epithelial cells and promote monocyte differentiation into a tumor-supporting M2 macrophage (7,8).

Background References

1. Imai, S. (2009) *Curr Pharm Des* 15, 20-8.
2. Samal, B. et al. (1994) *Mol Cell Biol* 14, 1431-7.
3. Revollo, J.R. et al. (2007) *Cell Metab* 6, 363-75.
4. Montecucco, F. et al. (2013) *Curr Drug Targets* 14, 637-43.
5. Wang, G. et al. (2014) *Cell* 158, 1324-34.
6. Yoon, M.J. et al. (2015) *Cell Metab* 21, 706-17.
7. Soncini, D. et al. (2014) *J Biol Chem* 289, 34189-204.
8. Audrito, V. et al. (2015) *Blood* 125, 111-23.

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 BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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Limited Uses

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