Revision 1

Store at -20C

#12665

PANK4 (D6J4R) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Hm Mk	Endogenous	82	Rabbit IgG	#Q9NVE7	55229

Product Usage Information

Application	Dilution
Western Blotting	1:1000

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

PANK4 (D6J4R) Rabbit mAb recognizes endogenous levels of total PANK4 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro522 of human PANK4 protein.

Background

Panthothenate kinase (PANK) is an enzyme that is responsible for catalyzing the first step in coenzyme A (CoA) synthesis (1-4). There are four human PANK genes (PANK1-4) (1-4). PANK4 is ubiquitously expressed, but higher expression levels are observed in muscle (1,2). PANK4 expression is elevated in rat skeletal muscle under high glucose conditions (2). There is evidence that rat PANK4 colocalizes with pyruvate kinase M2 (PKM2) *in vitro* (2). PANK4 may also play a protective role in beta-cell apoptosis by lowering the levels of pro-caspase-9 (3). Research studies have shown that mutations in the PANK2 gene are associated with Neurodegeneration with Brain Iron Accumulation (NBIA), formerly known as Hallervorden-Spatz syndrome (1,4). Expression of hPANK4 in a Drosophila model of NBIA rescues the phenotype with the exception of infertility (4).

Background References

1. Zhou, B. et al. (2001) *Nat Genet* 28, 345-9.
2. Li, Y. et al. (2005) *Mol Cell Biochem* 277, 117-25.
3. Xiang, R.L. et al. (2007) *Cell Res* 17, 966-8.
4. Wu, Z. et al. (2009) *Hum Mol Genet* 18, 3659-72.

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

W: Western Blotting

Cross-Reactivity Key

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

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