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DMPK Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP17033a

Specification

DMPK Antibody (N-term) Blocking Peptide - Product Information

Primary Accession Q09013

DMPK Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 1760

Other Names
Myotonin-protein kinase, MT-PK, DM-kinase, DMK, DM1 protein kinase, DMPK, Myotonic dystrophy protein kinase, DMPK, DM1PK, MDPK

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

DMPK Antibody (N-term) Blocking Peptide - Protein Information

Name DMPK

Synonyms DM1PK, MDPK

Function
Non-receptor serine/threonine protein kinase which is necessary for the maintenance of skeletal muscle structure and function. May play a role in myocyte differentiation and survival by regulating the integrity of the nuclear envelope and the expression of muscle-specific genes. May also phosphorylate PPP1R12A and inhibit the myosin phosphatase activity to regulate myosin phosphorylation. Also critical to the modulation of cardiac contractility and to the maintenance of proper cardiac conduction activity probably through the regulation of cellular calcium homeostasis. Phosphorylates PLN, a regulator of calcium pumps and may regulate sarcoplasmic reticulum calcium uptake in myocytes. May also phosphorylate FXYD1/PLM which is able to induce chloride currents. May also play a role in synaptic plasticity.

Cellular Location
Endoplasmic reticulum membrane; Single-pass type IV membrane protein; Cytoplasmic side. Nucleus outer membrane; Single-pass type IV membrane protein; Cytoplasmic side Mitochondrion outer membrane; Single-pass type IV membrane protein. Sarcoplasmic reticulum membrane. Cell membrane. Cytoplasm, cytosol. Note=Localizes to sarcoplasmic reticulum membranes of

cardiomyocytes. [Isoform 3]: Mitochondrion membrane.

Tissue Location
Most isoforms are expressed in many tissues including heart, skeletal muscle, liver and brain, except for isoform 2 which is only found in the heart and skeletal muscle, and isoform 14 which is only found in the brain, with high levels in the striatum, cerebellar cortex and pons.

DMPK Antibody (N-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

DMPK Antibody (N-term) Blocking Peptide - Images

DMPK Antibody (N-term) Blocking Peptide - Background

The protein encoded by this gene is a serine-threoninekinase that is closely related to other kinases that interact withmembers of the Rho family of small GTPases. Substrates for thisenzyme include myogenin, the beta-subunit of the L-type calciumchannels, and phospholemman. The 3' untranslated region of thisgene contains 5-37 copies of a CTG trinucleotide repeat. Expansionof this unstable motif to 50-5,000 copies causes myotonic dystrophytype I, which increases in severity with increasing repeat elementcopy number. Repeat expansion is associated with condensation oflocal chromatin structure that disrupts the expression of genes inthis region. Several alternatively spliced transcript variants ofthis gene have been described, but the full-length nature of someof these variants has not been determined.

DMPK Antibody (N-term) Blocking Peptide - References

Theerasasawat, S., et al. J Clin Neurosci 17(12):1520-1522(2010)Santoro, M., et al. Exp. Mol. Pathol. 89(2):158-168(2010)Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)Vignaud, A., et al. Neuromuscul. Disord. 20(5):319-325(2010)Kwon, M.J., et al. Ann. Clin. Lab. Sci. 40(2):156-162(2010)