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Product Information

MemDX™ Membrane Protein Human PTRH2 (Peptidyl-tRNA hydrolase 2) for Antibody Discovery

Cat. No.: **MP0016Q**
This product is for research use only and is not intended for diagnostic use.

This product is a 14.9 kDa Human PTRH2 membrane protein expressed in E. col. The protein is for research use only and is not approved for use in humans or in clinical diagnosis.

Product Specifications

Host Species
Human

Target Protein
PTRH2

Protein Length
Partial

Protein Class
Transmembrane

Molecular Weight
14.9 kDa

Sequence
MGSSHHHHHHSSGLVPRGSHMEYKMILVVR
NDLKMGKGKVAAQCSHAAVSAYKQIQRRNPEMLKQWEYCGQPKVVVKAPDEETLIALLAHAKMLGLTVSL
IQDAGRTQIAPGSQTVLGIGPGPADLIDKVTGHLKLY

Product Description

Expression Systems
E. coli

Tag
His

Form
Powder

Purification
Conventional chromatography

Purity

>95%

Buffer

20mM Tris buffer (pH 8.0) containing 10% glycerol, 1mM DTT

Storage

Store at +4°C for up to one week or several months at -80°C

Target

Target Protein

PTRH2

Full Name

Peptidyl-tRNA hydrolase 2

Introduction

The protein encoded by this gene is a mitochondrial protein with two putative domains, an N-terminal mitochondrial localization sequence, and a UPF0099 domain. *in vitro* assays suggest that this protein possesses peptidyl-tRNA hydrolase activity, to release the peptidyl moiety from tRNA, thereby preventing the accumulation of dissociated peptidyl-tRNA that could reduce the efficiency of translation. This protein also plays a role regulating cell survival and death. It promotes survival as part of an integrin-signaling pathway for cells attached to the extracellular matrix (ECM), but also promotes apoptosis in cells that have lost their attachment to the ECM, a process called anoikos. After loss of cell attachment to the ECM, this protein is phosphorylated, is released from the mitochondria into the cytosol, and promotes caspase-independent apoptosis through interactions with transcriptional regulators. This gene has been implicated in the development and progression of tumors, and mutations in this gene have been associated with an infantile multisystem neurologic, endocrine, and pancreatic disease (INMEPD) characterized by intellectual disability, postnatal microcephaly, progressive cerebellar atrophy, hearing impairment, polyneuropathy, failure to thrive, and organ fibrosis with exocrine pancreas insufficiency (PMID: 25574476). Alternative splicing results in multiple transcript variants encoding different isoforms.

Alternative Names

BIT1; CFAP37; CGI-147; IMNEPD; PTH; PTH 2; PTH2; peptidyl-tRNA hydrolase 2, mitochondrial; bcl-2 inhibitor of transcription 1; cilia and flagella associated protein 37

Gene ID

51651

UniProt ID

Q9Y3E5

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