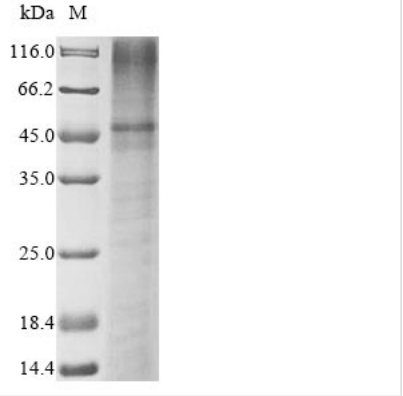
Recombinant Human Potassium channel subfamily K member 3 (KCNK3)

Product Code	CSB-CF012071HU
Relevance	pH-dependent, voltage-insensitive, background potassium channel protein. Rectification direction results from potassium ion concentration on either side of the membrane. Acts as an outward rectifier when external potassium concentration is low. When external potassium concentration is high, current is inward.
Abbreviation	Recombinant Human KCNK3 protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	O14649
Product Type	Transmembrane Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	MKRQNVRTLALIVCTFTYLLVGAAVFDALESEPELIERQRLELRQQELRARYNL SQGGYEELERVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGK VFCMFYALLGIPLTLVMFQSLGERINTLVRYLLHRAKKGLGMRRADVSMANMV LIGFFSCISTLCIGAAAFSHYEHWTFFQAYYYCFITLTTIGFGDYVALQKDQALQ TQPQYVAFSFVYILTGLTVIGAFLNLVVLRFMTMNAEDEKRDAEHRALLTRNGQ AGGGGGGGSAHTTDTASSTAAAGGGGFRNVYAEVLHFQSMCSCLWYKSRE KLQYSIPMIIPRDLSTSDTCVEQSHSSPGGGGRYSDTPSRRCLCSGAPRSAISS VSTGLHSLSTFRGLMKRRSSV
Research Area	Others
Source	in vitro E.coli expression system
Target Names	KCNK3
Protein Names	Acid-sensitive potassium channel protein TASK-1 (TWIK-related acid-sensitive K(+) channel 1) (Two pore potassium channel KT3.1) (Two pore K(+) channel KT3.1) (TASK) (TASK1)
Expression Region	1-394aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-tagged and C-terminal Myc-tagged
Mol. Weight	50.5 kDa
Protein Length	Full Length

Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

This recombinant HumanKCNK3 protein is an in vitro E.coli (cell-free) expressed Full Length protein. Its purity is 85%+ determined by SDS-PAGE. Cell-free protein expression is the in vitro synthesis of a protein using translation-compatible extracts of whole cells. In principle, whole-cell extracts contain all the macromolecules and components needed for transcription, translation, and even post-translational modification. These components include RNA polymerase, regulatory protein factors, transcription factors, ribosomes, and tRNA. When supplemented with cofactors, nucleotides, and the specific gene template, these extracts can synthesize proteins of interest in a few hours.

KCNK3 is an acid-sensitive potassium channel responsible for the regulation of plasma membrane resting potential of human pulmonary artery smooth muscle cells (PASMCs). It mediates outward potassium ions current to counteract depolarization-induced calcium ions influx. Mutations in KCNK3 have been considered as a rare cause of both familial and idiopathic pulmonary arterial hypertension (PAH). The reduced KCNK3 activities caused by mutations probably lead to depolarization of the resting membrane potential, which could result in vasoconstriction and pulmonary artery remodeling. Besides, KCNK3 negatively modulates thermogenesis by inhibiting cAMP-PKA signaling.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

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