

DGKE Protein, Human (Cell-Free, His, SUMO, Myc)

Cat. No.:	HY-P702262
Synonyms:	Diacylglycerol kinase epsilon; Diglyceride kinase epsilon; DGK-epsilon
Species:	Human
Source:	E. coli Cell-free
Accession:	P52429 (M1-E567)
Gene ID:	8526
Molecular Weight:	83.9 kDa

PROPERTIES

AA Sequence

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M E A E R R P A P G   S P S E G L F A D G   H L I L W T L C S V   L L P V F I T F W C
S L Q R S R R Q L H   R R D I F R K S K H   G W R D T D L F S Q   P T Y C C V C A Q H
I L Q G A F C D C C   G L R V D E G C L R   K A D K R F Q C K E   I M L K N D T K V L
D A M P H H W I R G   N V P L C S Y C M V   C K Q Q C G C Q P K   L C D Y R C I W C Q
K T V H D E C M K N   S L K N E K C D F G   E F K N L I I P P S   Y L T S I N Q M R K
D K K T D Y E V L A   S K L G K Q W T P L   I I L A N S R S G T   N M G E G L L G E F
R I L L N P V Q V F   D V T K T P P I K A   L Q L C T L L P Y Y   S A R V L V C G G D
G T V G W V L D A V   D D M K I K G Q E K   Y I P Q V A V L P L   G T G N D L S N T L
G W G T G Y A G E I   P V A Q V L R N V M   E A D G I K L D R W   K V Q V T N K G Y Y
N L R K P K E F T M   N N Y F S V G P D A   L M A L N F H A H R   E K A P S L F S S R
I L N K A V Y L F Y   G T K D C L V Q E C   K D L N K K V E L E   L D G E R V A L P S
L E G I I V L N I G   Y W G G G C R L W E   G M G D E T Y P L A   R H D D G L L E V V
G V Y G S F H C A Q   I Q V K L A N P F R   I G Q A H T V R L I   L K C S M M P M Q V
D G E P W A Q G P C   T V T I T H K T H A   M M L Y F S G E Q T   D D D I S S T S D Q
E D I K A T E
  
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Appearance

Lyophilized powder.

Formulation

Lyophilized from a 0.22 µm filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.

Endotoxin Level

<1 EU/µg, determined by LAL method.

Reconstitution

It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH₂O. For long term storage it is recommended to add 5-50% of glycerol (final concentration). Our default final concentration of glycerol is 50%. Customers could use it as reference.

Storage & Stability

Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

Shipping

Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

DGKE Protein, a membrane-bound diacylglycerol kinase, plays a crucial role in cellular signaling by converting diacylglycerol (DAG) into phosphatidic acid (PA), thereby orchestrating the balance between these bioactive lipids. Serving as a central switch in signaling pathways activated by these second messengers, DGKE exerts opposing effects on various biological processes. Additionally, DGKE contributes significantly to the biosynthesis of complex lipids. Notably, it exhibits specificity for diacylglycerol substrates with an arachidonoyl acyl chain at the sn-2 position, with a preference for specific molecular species within the phosphatidylinositol turnover cycle. While it can phosphorylate diacylglycerol substrates with a linoleoyl acyl chain at the sn-2 position, its efficiency in this process is comparatively lower. These functions highlight the intricate regulatory role of DGKE in cellular lipid signaling and metabolism.

Caution: Product has not been fully validated for medical applications. For research use only.

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