

RIPK3 Protein, Human (P.pastoris, His)

Cat. No.:	HY-P71855
Synonyms:	Receptor interacting protein 3; Receptor interacting serine threonine kinase 3; RIP like protein kinase 3; RIP-3; RIP-like protein kinase 3; RIPK 3
Species:	Human
Source:	P. pastoris
Accession:	Q9Y572 (M1-K518)
Gene ID:	11035
Molecular Weight:	Approximately 64 kDa

PROPERTIES

AA Sequence

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

Biological Activity The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.

Appearance Lyophilized powder.

Formulation Lyophilized after extensive dialysis against solution in PBS, 6% Trehalose, pH 7.4.

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.

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

RIPK3, a serine/threonine-protein kinase, orchestrates both necroptosis and apoptosis, two distinct forms of programmed cell death. Necroptosis, triggered by death-inducing TNF-alpha family members and activated by ZBP1, involves RIPK3-mediated phosphorylation of MLKL, leading to membrane damage and calcium influx. Additionally, in response to orthomyxovirus infection, nuclear RIPK3, prompted by ZBP1 activation, phosphorylates MLKL, causing nuclear envelope disruption and DNA leakage. RIPK3 also regulates apoptosis, dependent on RIPK1, FADD, and CASP8, independently of MLKL and RIPK3 kinase activity. In certain cell types, RIPK3 restricts viral replication through cell death-independent responses. In the context of Zika virus infection in neurons, RIPK3, along with ZBP1, promotes a death-independent transcriptional program, upregulating ACOD1/IRG1 and itaconate production, inhibiting succinate dehydrogenase, and suppressing viral genome replication. RIPK3 enhances the activity of metabolic enzymes (GLUL, GLUD1, PYGL), potentially influencing the tricarboxylic acid cycle and oxidative phosphorylation. During herpes simplex virus 1 infection, RIPK3 forms heteromeric amyloid structures with HHV-1 protein RIR1/ICP6, potentially inhibiting RIPK3-mediated necroptosis, enabling viral evasion of host cell death pathways.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA