MICAL2 Protein, Human (P.pastoris, His)

Cat. No.:	HY-P71756
Synonyms:	MICAL2; KIAA0750; MICAL2PV1; MICAL2PV2
Species:	Human
Source:	P. pastoris
Accession:	O94851 (1M-495H)
Gene ID:	9645
Molecular Weight:	Approximately 58.5 kDa

PROPERTIES

AA Sequence	M G E N E D E K Q A Q A G Q V F E N F V Q A S T C K G T L Q A F N I L T R H L D L D P L D H R N F Y S K L K S K V T T W K A K A L W Y K L D K R G S H K E Y K R G K S C T N T K C L I V G G G P C G L R T A I E L A Y L G A K V V V V E K R D S F S R N N V L H L W P F T I H D L R G L G A K K F Y G K F C A G S I D H I S I R Q L Q L I L F K V A L M L G V E I H V N V E F V K V L E P P E D Q E N Q K I G W R A E F L P T D H S L S E F E F D V I I G A D G R R N T L E G F R R K E F R G K L A I A I T A N F I N R N S T A E A K V E E I S G V A F I F N Q K F F Q D L K E E T G I D L E N I V Y Y K D C T H Y F V M T A K K Q S L L D K G V I I N D Y I D T E M L L C A E N V N Q D N L L S Y A R E A A D F A T N Y Q L P S L D F A M N H Y G Q P D V A M F D F T C M Y A S E N A A L V R E R Q A H Q L L V A L V G D S L L E P F W P M G T G C A R G F L A A F D T A W M V K S W N Q G T P P L E L L A E R E S L Y R L L P Q T T P E N I N K N F E Q Y T L D P G T R Y P N L N S H C V R P H Q V K H L Y I T K E L E H
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 Tris-based buffer, 50% glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
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	MICAL2, a methionine monooxygenase, plays a crucial role in promoting the depolymerization of F-actin by mediating the oxidation of residues 'Met-44' and 'Met-47' on actin, resulting in the formation of methionine-sulfoxide. This oxidative modification leads to actin filament disassembly, preventing repolymerization. Additionally, MICAL2 regulates the disassembly of branched actin networks by oxidizing ARP3B-containing ARP2/3 complexes, ultimately causing ARP3B dissociation from the network. Furthermore, MICAL2 serves as a key regulator in the SRF signaling pathway induced by nerve growth factor and serum. It mediates the oxidation and subsequent depolymerization of nuclear actin, enhancing the presence of MKL1/MRTF-A in the nucleus and facilitating SRF:MKL1/MRTF-A-dependent gene transcription. Notably, MICAL2 does not activate the SRF:MKL1/MRTF-A pathway through RhoA.

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