CAPZA2 Protein, Human (His-SUMO)

Cat. No.:	HY-P72116
Synonyms:	CAPPA2 ; Capping protein actin filament; muscle Z line; alpha 2 ; CapZ alpha 2; CapZ alpha-2; CAPZ; CAPZA2; CAZA2_HUMAN; F actin capping protein alpha 2 subunit; F actin capping protein subunit alpha 2; F-actin-capping protein subunit alpha-2
Species:	Human
Source:	E. coli
Accession:	P47755 (A2-A286)
Gene ID:	830
Molecular Weight:	Approximately 48.8 kDa

PROPERTIES

AA Sequence	A D L E E Q L S D E E K V R I A A K F I I H A P P G E F N E V F N D V R L L L N N D N L L R E G A A H A F A Q Y N L D Q F T P V K I E G Y E D Q V L I T E H G D L G N G K F L D P K N R I C F K F D H L R K E A T D P R P C E V E N A V E S W R T S V E T A L R A Y V K E H Y P N G V C T V Y G K K I D G Q Q T I I A C I E S H Q F Q A K N F W N G R W R S E W K F T I T P S T T Q V V G I L K I Q V H Y Y E D G N V Q L V S H K D I Q D S L T V S N E V Q T A K E F I K I V E A A E N E Y Q T A I S E N Y Q T M S D T T F K A L R R Q L P V T R T K I D W N K I L S Y K I G K E M Q N A
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm solution of 10 mM Tris-HCl, 1 mM EDTA, 6% Trehalose, pH 8.0.
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	The CAPZA2 protein, a member of F-actin-capping proteins, binds to the fast-growing ends of actin filaments (barbed end) in a Ca(2+)-independent manner, effectively blocking the exchange of subunits at these ends without severing actin filaments, distinguishing it from other capping proteins like gelsolin and severin. CAPZA2 functions as a heterodimer with an alpha and a beta subunit and is an integral component of the WASH complex, which comprises F-actin-capping protein subunit alpha (CAPZA1, CAPZA2, or CAPZA3), F-actin-capping protein subunit beta (CAPZB), and various WASH complex subunits.

Additionally, CAPZA2 interacts with RCSD1/CAPZIP and directly associates with CRACD, with this interaction shown to decrease its binding to actin. The versatile nature of CAPZA2 in modulating actin dynamics highlights its role in regulating cytoskeletal architecture and cellular processes associated with actin filament organization.

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