

## PACSIN1 Protein, Human (HEK293, His)

<b>Cat. No.:</b>	HY-P71183
<b>Synonyms:</b>	Protein Kinase C and Casein Kinase Substrate in Neurons Protein 1; PACSIN1; KIAA1379
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	Q9BY11 (M1-I444)
<b>Gene ID:</b>	29993
<b>Molecular Weight:</b>	Approximately 52.0 kDa

### PROPERTIES

<b>AA Sequence</b>	<pre> M S S S Y D E A S L   A P E E T T D S F W   E V G N Y K R T V K   R I D D G H R L C N D L M N C V Q E R A   K I E K A Y G Q Q L   T D W A K R W R Q L   I E K G P Q Y G S L E R A W G A I M T E   A D K V S E L H Q E   V K N N L L N E D L   E K V K N W Q K D A Y H K Q I M G G F K   E T K E A E D G F R   K A Q K P W A K K M   K E L E A A K K A Y H L A C K E E K L A   M T R E M N S K T E   Q S V T P E Q Q K K   L Q D K V D K C K Q D V Q K T Q E K Y E   K V L E D V G K T T   P Q Y M E N M E Q V   F E Q C Q Q F E E K R L V F L K E V L L   D I K R H L N L A E   N S S Y I H V Y R E   L E Q A I R G A D A Q E D L R W F R S T   S G P G M P M N W P   Q F E E W N P D L P   H T T T K K E K Q P K K A E G V A L T N   A T G A V E S T S Q   A G D R G S V S S Y   D R G Q P Y A T E W S D D E S G N P F G   G S E T N G G A N P   F E D D S K G V R V   R A L Y D Y D G Q E Q D E L S F K A G D   E L T K L G E E D E   Q G W C R G R L D S   G Q L G L Y P A N Y V E A I </pre>
<b>Appearance</b>	Solution.
<b>Formulation</b>	Supplied as a 0.2 µm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	N/A
<b>Storage &amp; Stability</b>	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
<b>Shipping</b>	Shipping with dry ice.

### DESCRIPTION

<b>Background</b>	PACSIN1 Protein plays a multifaceted role in cellular dynamics, contributing significantly to the reorganization of both the
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microtubule and actin cytoskeletons. Through its interaction with MAPT, PACSIN1 orchestrates the reorganization of the microtubule cytoskeleton, leading to a reduction in microtubule stability and the inhibition of MAPT-induced microtubule polymerization. Simultaneously, PACSIN1 participates in cellular transport processes by recruiting DNM1, DNM2, and DNM3 to membranes. In the realm of neuron morphogenesis, PACSIN1 interacts with COBL and WASL, recruiting COBL to the cell cortex and influencing the reorganization of the actin cytoskeleton. This intricate network extends to the regulation of neurite formation, branching, and length, crucial for normal synaptic vesicle endocytosis and neurotransmission. Anchoring to membranes via its F-BAR domain, PACSIN1 mediates membrane tubulation and exhibits versatility in forming heterooligomers with other PACSINs, further highlighting its central role in diverse cellular processes. Interactions with MAPT, TRPV4, SYNJ1, WASL, DNM2, DNM3, COBL, DBNL, EHD1, and EHD3 underscore the complexity of PACSIN1's molecular engagements, contributing to its multifunctional significance in cellular physiology.

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

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