

PRKAR1A Protein, Mouse (sf9, His)

Cat. No.:	HY-P75982
Synonyms:	cAMP-dependent protein kinase type I-alpha regulatory subunit; Tissue-specific extinguisher 1; TSE1; PKR1; PRKAR1
Species:	Mouse
Source:	Sf9 insect cells
Accession:	Q9DBC7 (M1-V381)
Gene ID:	19084
Molecular Weight:	Approximately 44.6 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 20 mM Tris, 300 mM NaCl, pH 7.5, 10% Glycerol. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
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 ddH ₂ O.
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	<p>PRKAR1A protein serves as a regulatory subunit in the cAMP-dependent protein kinases, playing a pivotal role in mediating cellular responses to cAMP signaling. The inactive holoenzyme comprises two regulatory chains and two catalytic chains. Upon activation by cAMP, the regulatory dimer dissociates, releasing two active catalytic monomers. PRKAR1A interacts with PRKACA and PRKACB, forming a dynamic complex involved in cAMP-dependent signaling cascades. Notably, it associates with RFC2, suggesting a potential role in cell survival mechanisms. Additional interactions include AKAP4, facilitating intricate signaling events, and RARA, where the interaction, influenced by cAMP or FSH, regulates RARA transcriptional activity. PRKAR1A further engages with phosphorylated PJA2, PRKX, CBFA2T3, and smAKAP, contributing to the modulation of cAMP-dependent protein kinase functions and targeting PRKAR1A to specific cellular locations, such as the plasma membrane. Additionally, PRKAR1A exhibits interactions with AICDA, indicating a role in diverse cellular processes. These interactions underscore the multifaceted involvement of PRKAR1A in cellular signaling and regulation.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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