

Active Recombinant Human Full Length PRKAR1A Protein

Cat. No. PRKAR1A-7014H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Recombinant Full Length Human PRKAR1A Protein without tag was expressed in Insect Cells.
Species	Human
Source	Insect Cells
ProteinLength	1-381 aa
Description	The Regulatory (R) subunit of Protein Kinase A (PKA) inhibits its kinase activity by shielding the Catalytic (C) subunit from physiological substrates. This inhibition is reversed in response to extra-cellular signals that increase cAMP levels in the cytoplasm. Upon cAMP binding to R, C is allosterically released from R, activating a spectrum of downstream signaling cascades. Crystallographic data indicated that a series of distinct conformational changes within CBD-A must occur to relay the cAMP signal from the cAMP binding site to the R:C interaction interface. One critical cAMP relay site within the CBD-A of R has been identified as Asp170 because the D170A mutation selectively reduces the negative cooperativity between the cAMP- and C-recognition sites (i.e. the KD for the R:C complex in the presence of cAMP is reduced by more than 12-fold), without significantly compromising the high affinity of R for both binding partners.
Form	Sterile Filtered clear solution. PKA regulatory subunit-I alpha is supplied at a concentration of 0.8 mg/mL in 20mM MOPS (pH 7.0), 150mM NaCl, 1mM 2-

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	mercaptoethanol and 50% glycerol.
Bio-activity	The cAMP-dependent protein kinase, regulatory subunit RIa reversibly inhibits the catalytic subunit Ca of the cAMP-dependent protein kinase PKA. The inhibition of the catalytic subunit can be reversed by the addition of the second messenger cAMP.
Molecular Mass	86 kDa
AASequence	MESGSTAASEEARSRLRECELYVQKHNIQALLKDSIVQLCTARPERPMAFLREYFERL EKEEAKQIQNLQKAGTRTDSREDEISPPPPNPVVKGRRRRGAISAEVYTEEDAASYV RKVIPKDYKTMAALAKAIEKNVLFSLDDNERSDIFDAMFSVSFIAGETVIQQGDEGD NFYVIDQGETDVYVNNEWATSVGEGGSFGELALIYGTPRAATVKAKTNVKLWGIDR DSYRRILMGSTLRKRKMYEEFLSKVSILESLDKWERLTVADALEPVQFEDGQKIVVQ GEPGDEFFIILEGSAAVLQRRSENEEFVEVGRLGPSDYFGEIALLMNRPRAATVVAR GPLKCVKLDRPRFERVLGPCSDILKRNIQQYNSFVSLSV
Purity	Greater than 95% as determined by SDS-PAGE.
Notes	Our products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.
Storage	PKAR-Ia should be stored at 4 centigrade if entire vial will be used within 2-4 weeks. For long term storage it is recommended to store at -20 centigrade. Avoid multiple freeze-thaw cycles.
Shipping	Shipped with Ice Packs.

GENE INFORMATION

Gene Name	PRKAR1A protein kinase cAMP-dependent type I regulatory subunit alpha [Homo
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	sapiens (human)]
Official Symbol	PRKAR1A
Synonyms	PRKAR1A; protein kinase, cAMP-dependent, regulatory, type I, alpha (tissue specific extinguisher 1); PRKAR1, TSE1; cAMP-dependent protein kinase type I-alpha regulatory subunit; tissue-specific extinguisher 1; protein kinase A type 1a regulatory subunit; cAMP-dependent protein kinase regulatory subunit RIalpha; cAMP-dependent protein kinase type I-alpha regulatory chain; CAR; CNC; CNC1; PKR1; TSE1; ADOHR; PPNAD1; PRKAR1; MGC17251; DKFZp779L0468
Gene ID	5573
mRNA Refseq	NM_002734
Protein Refseq	NP_002725
MIM	188830
UniProt ID	P10644