www.neobiolab.com
info@neobiolab.com
888.754.5670, +1 617.500.7103 United States
0800.088.5164, +44 020.8123.1558 United Kingdom

PKAR-I alpha Human

Catalog #:PKPS-209

For research use only.

Description:PKA regulatory subunit I a Human Recombinant is a dimeric 86kDa protein (the monomer is 381 aa 43kDa). PKAR-I alpha is purified by proprietary chromatographic techniques.

Synonyms:cAMP-dependent protein kinase type I-alpha regulatory subunit, Tissue-specific extinguisher 1, TSE1, PRKAR1A PKR1, PRKAR1, CAR, CNC, CNC1, PKR1, ADOHR, PPNAD1, ACRDYS1.

Source: Escherichia Coli.

Physical Appearance: Sterile Filtered clear solution.

Purity: Greater than 95% as determined by SDS-PAGE.

Formulation:

PKA regulatory subunit-I alpha is supplied at a concentration of 1.3 mg/ml in 20mM MOPS (pH 7.0), 150mM NaCl, 1mM 2-mercaptoethanol and 50% glycerol.

Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drμgs, agricultural or pesticidal products, food additives or household chemicals.

Introduction:

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.

Storage:

PKAR-Ia should be stored at 4°C if entire vial will be used within 2-4 weeks. For long term storage it is recommended to store at -20°C. Avoid multiple freeze-thaw cycles.

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