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Protein Kinase A regulatory subunit I alpha Antibody (N-term) Blocking peptide

Synthetic peptide
Catalog # BP8095a

Specification

Protein Kinase A regulatory subunit I alpha Antibody (N-term) Blocking peptide - Product Information

Primary Accession P10644

Protein Kinase A regulatory subunit I alpha Antibody (N-term) Blocking peptide - Additional Information

Gene ID 5573

Other Names
cAMP-dependent protein kinase type I-alpha regulatory subunit, Tissue-specific extinguisher 1, TSE1, cAMP-dependent protein kinase type I-alpha regulatory subunit, N-terminally processed, PRKAR1A, PKR1, PRKAR1, TSE1

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP8095a was selected from the N-term region of human PKR1 . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Protein Kinase A regulatory subunit I alpha Antibody (N-term) Blocking peptide - Protein Information

Name PRKAR1A

Synonyms PKR1, PRKAR1, TSE1

Function
Regulatory subunit of the cAMP-dependent protein kinases involved in cAMP signaling in cells.

Cellular Location
Cell membrane.

Tissue Location
Four types of regulatory chains are found: I-alpha, I-beta, II-alpha, and II-beta. Their expression varies among tissues and is in some cases constitutive and in others inducible

Protein Kinase A regulatory subunit I alpha Antibody (N-term) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

Protein Kinase A regulatory subunit I alpha Antibody (N-term) Blocking peptide - Images

Protein Kinase A regulatory subunit I alpha Antibody (N-term) Blocking peptide - Background

cAMP is a signaling molecule important for a variety of cellular functions. cAMP exerts its effects by activating the cAMP-dependent protein kinase (AMPK), which transduces the signal through phosphorylation of different target proteins. The inactive holoenzyme of AMPK is a tetramer composed of two regulatory and two catalytic subunits. cAMP causes the dissociation of the inactive holoenzyme into a dimer of regulatory subunits bound to four cAMP and two free monomeric catalytic subunits. Four different regulatory subunits and three catalytic subunits of AMPK have been identified in humans. PKR1 is one of the regulatory subunits. This protein was found to be a tissue-specific extinguisher that down-regulates the expression of seven liver genes in hepatoma x fibroblast hybrids. Functional null mutations in the gene cause Carney complex (CNC), an autosomal dominant multiple neoplasia syndrome. The gene can fuse to the RET protooncogene by gene rearrangement and form the thyroid tumor-specific chimeric oncogene known as PTC2.

Protein Kinase A regulatory subunit I alpha Antibody (N-term) Blocking peptide - References

Gronholm, M., et al., J. Biol. Chem. 278(42):41167-41172 (2003).Bertherat, J., et al., Cancer Res. 63(17):5308-5319 (2003).Stergiopoulos, S.G., et al., FEBS Lett. 546(1):59-64 (2003).Robinson-White, A., et al., Hum. Mol. Genet. 12(13):1475-1484 (2003).Holm, A.M., et al., J. Immunol. 170(11):5772-5777 (2003).