

OriGene Technologies Inc.

9620 Medical Center Drive, Ste 200 Rockville, MD 20850 UNITED STATES Phone: +1-858-888-7900 Fax: +1-858-888-7904 <u>US-info@acris-antibodies.com</u>

AP01882PU-N OriGene EU

Acris Antibodies GmbH Schillerstr. 5 32052 Herford GERMANY

GERMANY Phone: +49-5221-34606-0 Fax: +49-5221-34606-11 info@acris-antibodies.com

Polyclonal Antibody to AMPK1 / AMPK2 pThr174/172 -Aff - Purified 5'-AMP-activated protein kinase catalytic subunit alpha-1, 5'-AMP-activated protein kinase **Alternate names:** catalytic subunit alpha-2, AMPK alpha-1 chain, AMPK alpha-2 chain, PRKAA1, PRKAA2 **Catalog No.:** AP01882PU-N **Quantity:** 0.1 mg **Concentration:** 1.0 mg/ml **Background:** Five-prime-AMP-activated protein kinase, known as AMPK, is a heterotrimeric complex that comprises of a catalytic α subunits, and regulatory β and γ . AMPK protects cells from stresses that cause ATP depletion by switching off ATP-consuming biosynthetic pathways. AMPK is activated by high AMP and low ATP via a mechanism involving allosteric regulation, promotion of phosphorylation by an upstream protein kinase known as AMPK kinase (AMPKK), and inhibition of dephosphorylation. Activated AMPK can phosphorylate and regulate in vivo hydroxymethylglutaryl-CoA reductase and acetyl-CoA carboxylase, which are key regulatory enzymes of sterol synthesis and fatty acid synthesis, respectively. The human AMPKa1 gene maps to chromosome 5p12 and encodes a 548 amino acid protein. The major regulatory site phosphorylated by AMPKK on AMPKa has been identified as Thr 172 within the activation loop between the DFG and APE motifs of the a subunits Host: Rabbit Format: **State:** Liquid purified lg fraction (> 95% pure by SDS-PAGE). **Purification:** Affinity Chromatography using epitope-specific immunogen. Buffer System: Phosphate buffered saline (PBS), pH~7.2 containing 0.05% Sodium Azide as preservative. **Applications:** Western Blot: 1/500-1/1000. Immunohistochemistry on paraffin sections: 1/50-1/200. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user. Molecular Weight: ~ 62 kDa **Specificity:** This antibody detects endogenous levels of AMPK alpha1/2 protein when phosphorylated at Thr174 or Thr172. Species Reactivity: Tested: Human. Expected from sequence similarity: Mouse and Rat. Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Storage: Avoid repeated freezing and thawing. Shelf life: One year from despatch.

For research and in vitro use only. Not for diagnostic or therapeutic work. Material Safety Datasheets are available at www.acris-antibodies.com or on request.



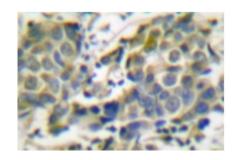
VA/20130912

Acris Antibodies is now part of the OriGene family. Learn more at www.origene.com

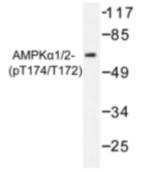


Pictures:

Immunohistochemistry (IHC) analyzes of p-AMPKα1/2 (pThr174/172) antibody (Cat.-No.: AP01882PU-N) in paraffinembedded human breast carcinoma tissue.



Western blot (WB) analysis of AMPKa1/2 (pThr174/172) antibody (Cat.-No.: AP01882PU-N) in extracts from COS7 cells treated with Adriamycin 0.5 ng/ml 24hours .





VA/20130912