OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850
UNITED STATES
Phone: +1-888-267-4436
Fax: +1-301-340-8606
techsupport@origene.com

OriGene Technologies GmbH
Schillerstr. 5
32052 Herford
GERMANY
Phone: +49-5221-34606-0
Fax: +49-5221-34606-11
info-de@origene.com

AP05572SU-N Polyclonal Antibody to 14-3-3 protein zeta/delta (N-term acetylated) - Serum

Alternate names: KCIP-1, Protein kinase C inhibitor protein 1, YWHAZ

Quantity: 0.1 ml

Background: It is a member of the 14-3-3 family which consists of 30kDa proteins that are involved in multiple protein kinase signaling pathways, regulation of cell cycle progression, cytoskeletal structure, transcription, intracellular trafficking and targeting. Protein interactions with 14-3-3 show distinct preference for its different isotypes and are regulated by phosphorylation of both 14-3-3 and the bound protein. 14-3-3 zeta is a susceptibility gene for paranoid schizophrenia and is overexpressed in the temporal cortex of cognitively impared Alzheimers patients. The protein binds yeast Sps1/Ste20-related kinase 1 (YSK1) and localizes to the golgi, possibly linking YSK1 signaling, protein transport, cell adhesion and migration. It co-localizes with epidermal growth factor receptor to the plasma membrane following epidermal growth factor signaling. The zeta isoform is involved in MAPKAPK2-mediated phosphorylation which may have a role in p38 MAPK-dependent inflammation. When bound to ADAM 22, 14-3-3 zeta is involved in cell adhesion. 14-3-3 zeta also interacts with cofilin, LIM-domain-containing protein kinase 1, protein kinase B/Akt and GPI alpha.

Uniprot ID: P29361

NCBI: 9940

Host / Isotype: Rabbit / IgG

Immunogen: Synthetic peptide corresponding to acetylated N-terminal sequence of Sheep 14-3-3 zeta.
AA Sequence:
Ac . MDKNELVQKAC
Remarks: Antiserum Preparation: Antisera to anti 14-3-3 zeta/delta were raised by repeated immunisations of rabbits with highly purified antigen.

Format: **State:** Liquid Serum containing 0.09% Sodium Azide as preservative

Applications: **ELISA.**
Western Blot: 1/3000. Detects a band of approximately 30kDa in HEK293 cell lysates.
Immunohistochemistry on Paraffin Sections: 1/400. Requires antigen retrieval using heat treatment prior to staining of paraffin sections.
Positive Control: Normal brain tissue.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: This antibody recognizes the acetylated N-terminal of 14-3-3 zeta and the phosphorylated zeta isoform (also known as 14-3-3 delta) in all mammals.
This antibody may not react with recombinant proteins that are not N-acetylated.

Species Reactivity:

Tested: Sheep, Bovine, Chicken, Rat, Human, Mouse.
Expected from sequence similarity: Mammals.

Storage:

Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings:

1. Martin, H. et al. (1993) Antibodies against major brain isoforms of 14-3-3 protein. An antibody specific for the Nacetylated aminoterminus of a protein. FEBS 331: 296 - 303.
2. Aitken, A. et al. (2006) 14-3-3 proteins: A historic overview. Seminars in Cancer Biology 16: 162 - 172.
3. Wang, Z. et al. (2011) The prognostic value of 14-3-3 isoforms in vulvar squamous cell carcinoma cases: 14-3-3ß and e are independent prognostic factors for these tumors.
PLoS One. 6: e24843.

Pictures:

Western blots of 14-3-3 isoforms in HEK293 cell extracts using 14-3-3 antibodies. Lane 1: anti-gamma 14-3-3 (AP05567SU-N) Lane 2: anti-zeta 14-3-3 (AP05572SU-N) Lane 3: anti-C-epsilon-14-3-3 (AP05565SU-N) Lane 4: anti-N-epsilon-14-3-3 (AP05568SU-N) Lane 5: anti-eta 14-3-3. (AP05566SU-N) The 14-3-3 isoforms run at 30kDa except epsilon 14-3-3