

Human 14-3-3 epsilon / YWHAE Protein

Catalog Number: 10842-HNCE



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

14-3-3E; HEL2; KCIP-1; MDCR; MDS

Protein Construction:

A DNA sequence encoding the human YWHAE (NP_006752.1) (Met 1-Gln 255) was expressed, with two additional amino acids (Gly & Pro) at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 96 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Gly

Molecular Mass:

The recombinant human YWHAE consists of 257 amino acids and has a predicted molecular mass of 29.4 kDa as estimated in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 150mM NaCl, 0.25mM DTT, 25% glycerol, 0.5mM GSH, pH 7.5

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

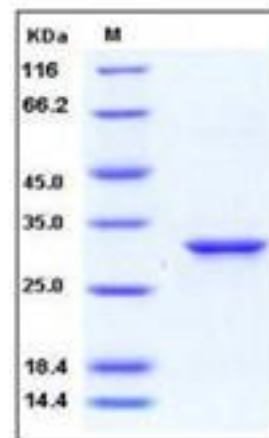
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

YWHAE, also known as 14-3-3 epsilon, mediate signal transduction by binding to phosphoserine-containing proteins. 14-3-3 epsilon / YWHAE is a member of the 14-3-3 proteins family. 14-3-3 proteins are a group of highly conserved proteins that are involved in many vital cellular processes such as metabolism, protein trafficking, signal transduction, apoptosis and cell cycle regulation. 14-3-3 proteins are mainly localized in the synapses and neuronal cytoplasm, and seven isoforms have been identified in mammals. This family of proteins was initially identified as adaptor proteins which bind to phosphoserine-containing motifs. Binding motifs and potential functions of 14-3-3 proteins are now recognized to have a wide range of functional relevance. 14-3-3 epsilon / YWHAE is found in both plants and mammals, and this protein is 100% identical to the mouse ortholog. YWHAE interacts with CDC25 phosphatases, RAF1 and IRS1 proteins, suggesting its role in diverse biochemical activities related to signal transduction, such as cell division and regulation of insulin sensitivity. It has also been implicated in the pathogenesis of small cell lung cancer. 14-3-3 epsilon / YWHAE is implicated in the regulation of a large spectrum of both general and specialized signaling pathways. 14-3-3 epsilon / YWHAE Binds to a large number of partners, usually by recognition of a phosphoserine or phosphothreonine motif. This Binding generally results in the modulation of the activity of the binding partner.

References

1. Ikeda M, *et al.* (2008) Identification of YWHAE, a gene encoding 14-3-3epsilon, as a possible susceptibility gene for schizophrenia. *Hum Mol Genet.* 17(20): 3212-22. 2. Mignon-Ravix C, *et al.* (2010) Deletion of YWHAE in a patient with periventricular heterotopias and pronounced corpus callosum hypoplasia. *J Med Genet.* 47(2): 132-6. 3. Nagamani SC, *et al.* (2009) Microdeletions including YWHAE in the Miller-Dieker syndrome region on chromosome 17p13.3 result in facial dysmorphisms, growth restriction, and cognitive impairment. *J Med Genet.* 46(12): 825-33.

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