

## 14-3-3 $\alpha$ / $\beta$ Protein

Full-length recombinant protein expressed in E. coli cells

**Catalog # Y71-30G**

Lot # C269-1

### Product Description

Recombinant full-length human 14-3-3 $\alpha$ / $\beta$  was expressed in E. coli cells using an N-terminal GST tag. The gene accession number is [NM\\_003404](#).

### Gene Aliases

YWHAB, HS1, GW128, KCIP-1

### Formulation

Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 150mM NaCl, 0.25mM DTT, 0.1mM PMSF, 25% glycerol.

### Storage and Stability

Store product at  $-70^{\circ}\text{C}$ . For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

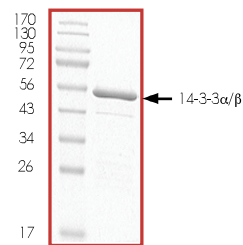
### Scientific Background

14-3-3 $\alpha$ / $\beta$  is a member of the highly conserved 14-3-3 family of proteins which mediate signal transduction by binding to phosphoserine-containing proteins (1). 14-3-3 $\alpha$ / $\beta$  protein has been shown to interact with RAF1 and CDC25 phosphatases, suggesting that it may play a role in linking mitogenic signaling and the cell cycle machinery. 14-3-3 $\beta$  interacts with the TSC1-TSC2 dimer (2). The interaction required phosphorylation of TSC2 at Ser1210. Binding of 14-3-3 $\beta$  to TSC2 did not alter the interaction between TSC1 and TSC2, but it reduced the ability of the complex to inhibit phosphorylation of ribosomal protein S6 kinase impairing the ability of the complex to inhibit cell growth.

### References

1. Yaffe, M B. et al: The structural basis for 14-3-3:phosphopeptide binding specificity. *Cell* 91: 961-971, 1997.
2. Shumway, S D. et al: 14-3-3-beta binds to and negatively regulates the tuberous sclerosis complex 2 (TSC2) tumor suppressor gene product, tuberin. *J. Biol. Chem.* 278: 2089-2092, 2003.

### Purity



The purity was determined to be **>90%** by densitometry.  
Approx. MW **54kDa**.

### Upstream Active Kinases

RAF1 (EE), Active      R01-13G

## 14-3-3 $\alpha$ / $\beta$ Protein

Full-length recombinant protein expressed in E. coli cells

Catalog Number      Y71-30G

Specific Lot Number      C269-1

Purity      >90%  
Concentration      0.2  $\mu\text{g}/\mu\text{l}$

Stability      1yr At  $-70^{\circ}\text{C}$  from date of shipment  
Storage & Shipping      Store product at  $-70^{\circ}\text{C}$ . For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles. Product shipped on dry ice.

To place your order, please contact us by phone 1-(604)-232-4600, fax 1-604-232-4601 or by email: [orders@signalchem.com](mailto:orders@signalchem.com)  
[www.signalchem.com](http://www.signalchem.com)

**FOR IN VITRO RESEARCH PURPOSES ONLY. NOT INTENDED FOR USE IN HUMAN OR ANIMALS.**