

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

Full-length recombinant protein expressed in E. coli cells

**Catalog # Y71-30N**

Lot # H2657-6

### Product Description

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

### Gene Aliases

14-3-3 alpha/beta, YWHAB, HS1, GW128, KCIP-1

### Formulation

Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 50mM NaCl, 0.25mM DTT, 0.1mM PMSF, and 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.

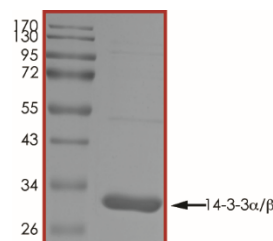
### Scientific Background

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 $\alpha/\beta$  interacts with the TSC1-TSC2 dimer (2). The interaction required phosphorylation of TSC2 at Ser1210. Binding of 14-3-3 $\alpha/\beta$  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 of 14-3-3 $\alpha/\beta$  was determined to be **>90%** by densitometry. Approx. MW **29kDa**.

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Catalog #	Y71-30N
Lot #	H2657-6
Purity	>90%
Concentration	0.2 µg/µl
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.

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