**14-3-3σ Protein**

Full-length recombinant protein expressed in E. coli cells

**Catalog # Y86-30G**  
Lot # U255-1

**Product Description**

Recombinant full-length human 14-3-3σ was expressed in E. coli cells using an N-terminal GST tag. The gene accession number is **NM_006142**.

**Gene Aliases**

SFN, stratifin, YWHAS

**Formulation**

Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 150mM NaCl, 10mM glutathione, 0.1mM EDTA, 0.25mM DTT, 0.1mM PMSF, 25% glycerol.

**Storage and Stability**

Store product at –70°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**

14-3-3σ or stratifin is a protein that is strongly induced by gamma irradiation and other DNA-damaging agents (1). The induction of 14-3-3σ is mediated by a p53 responsive element. Exogenous introduction of 14-3-3σ into cycling cells results in a G2 cell cycle arrest (2). Knockout of 14-3-3σ in cells showed that the cells are unable to maintain cell cycle arrest after DNA damage. The 14-3-3sigma-/- cells die as they enter mitosis. This process is associated with a failure of the 14-3-3σ-deficient cells to sequester the proteins that initiate mitosis and prevent them from entering the nucleus. Thus, 14-3-3σ plays an important role in maintaining the G2 checkpoint in cells and preventing mitotic death.

**References**