Product Information

14-3-3 Gamma human, recombinant expressed in *Escherichia coli* histidine tagged

Catalog Number **G0548**
Storage Temperature –20 °C

Synonyms: Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, gamma polypeptide; Protein kinase C inhibitor protein 1; YWHAG; KCIP-1;

Product Description

The 14-3-3 proteins are a multifunctional protein family of seven mammalian isoforms that interact with over 200 different intracellular molecules, including kinases, phosphatases, transcription factors, scaffold proteins, and DNA. 14-3-3 proteins are involved in a multitude of biological functions and play a regulatory role in processes such as apoptotic cell death, mitogenic signal transduction, and cell cycle control. 1,2

14-3-3γ is abundantly expressed in the brain. Increased levels of 14-3-3γ and ε isoforms were found in brains of patients with Alzheimer’s disease and Down syndrome. 3 In addition, 14-3-3γ has been detected in the cerebrospinal fluid of patients with different neurological disorders, like AIDS dementia complex or cytomegalovirus encephalitis, and sporadic Creutzfeldt–Jakob disease. 4,5

14-3-3γ was found to be involved in cancerous processes. It is consistently upregulated in human lung cancers and when introduced into H322 lung cancer cells it causes polyploidization. 6,7 Moreover, 14-3-3γ stimulates abnormal cell proliferation in neuronal cells in differentiating eye imaginal discs. 8

14-3-3γ expression is induced in arterial trauma by cytokines, which suggests an important role for this protein in progression of vascular proliferative diseases. 9 14-3-3γ mRNA is found in large amounts in heart and skeletal muscle, suggesting an additional role for the γ isoform in muscle cells metabolism. The expression of 14-3-3 γ in muscle fibers specifically represses the transcription of synaptic genes. 10,11

The product is supplied in a 0.2 µm filtered solution of 50 mM Tris, pH 7.6, 1 mM EDTA, 1 mM DTT, and 20% (w/v) glycerol.

Purity: ≥90% (SDS-PAGE)

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

The product ships on dry ice and storage at –20 °C is recommended. Upon first use it is recommended to divide the enzyme into aliquots and store at –20 °C. The product is stable at –20 °C for at least 2 years.

References