Product Information

14-3-3 Tau/Theta
human, recombinant
expressed in *Escherichia coli*
histidine-tagged (C-terminal)

Catalog Number **T0953**
Storage Temperature –20 °C

Synonyms: 14-3-3τ, 10971, YWHAQ, 609009, P27348, 1C5, HS1

**Product Description**
The 14-3-3 proteins are a multifunctional protein family composed 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 processes and play a regulatory role in processes such as apoptotic cell death, mitogenic signal transduction, and cell cycle control.¹,²

Co-immunoprecipitation experiments demonstrate the interaction of 14.3.3τ/θ adaptor protein with various proteins. For example, precipitation with uncoupling protein 3 (UCP3) implies a role of 14-3-3τ/θ in targeting UCPs to the mitochondria and the facilitation of complex formation between PKC-ζ and Raf-1.³,⁴ 14-3-3τ/θ was shown to be involved cell cycle arrest and cellular differentiation. It was demonstrated that 14-3-3 associates with and activates the MEF2D transcription factor during muscle cell differentiation.⁵

Moreover, there is evidence implicating that 14-3-3τ/θ plays an active role in mediating Vpr-induced cell cycle arrest in human T cells.⁶

There is a growing emergence of data linking 14-3-3 proteins to various human diseases such as neurodegenerative conditions, and cancer and heart diseases.¹ Elevated levels of 14-3-3τ/θ are observed in amyotrophic lateral sclerosis.⁷ In addition, 14-3-3τ/θ was identified as an antigen that induces a hormonal response in lung cancer.⁸

The product is supplied in a 0.2 µm filtered solution of 50 mM Tris-HCl, pH 7.6, with 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**
