Product Information

14-3-3 Epsilon
human, recombinant,
expressed in *Escherichia coli*
C-terminal histidine-tagged

Catalog Number E2033
Storage Temperature –20 °C

Synonyms: 14-3-3ε, 14-3-3E, YWHAE, MDS, MDCR, KCIP-1, FLJ45465

Product Description
The 14-3-3 proteins compose a multifunctional protein family containing 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.\(^1\),\(^2\)

14-3-3ε was found to interact with various proteins. Interactions with cdc25 phosphatases, Raf1, and IRS-1 are the most studied. The involvement of the later two proteins in diverse signal transduction pathways suggests a role for 14-3-3ε in biological phenomenon such as cell division and regulation of insulin sensitivity.\(^3\),\(^4\)

There is a growing emergence of correlative data linking 14-3-3 proteins to various human diseases such as neurodegenerative conditions, and cancer and heart diseases.\(^7\) 14-3-3ε has also been implicated in the pathogenesis of small cell lung cancer.\(^7\) In addition, children with Miller-Dieker syndrome, a severe brain malformation associated with mental retardation, have heterozygous deletions of both the 14-3-3ε and *LIS1* genes.\(^6\) Moreover, the 14-3-3ε gene was found to be associated with suicide potential.\(^7\)

Reagent
The product is supplied in a 0.2 µm filtered solution of 50 mM potassium phosphate buffer and 300 mM NaCl.

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 initial 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