Product Information

14-3-3 Eta
human, recombinant
expressed in Escherichia coli
histidine-tagged (C-terminal)

Catalog Number E1408
Storage Temperature –20 °C

Synonyms: 14-3-3η, YWHAH, MGC93547, 14-3-3F, 14-3-3e

Product Description
14-3-3 is a family of ~30 kDa proteins, 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

The adaptor protein 14-3-3η has been shown to bind various proteins, among them the MTLX-2 transcription factor as well as the DNA binding domain of the Miz1 transcription factor, which results in the inhibition of Miz1 function.3 14-3-3η binds glucocorticoid receptor and thus, functions as a positive regulator in the glucocorticoid signaling pathway.4,5

14-3-3η was found to be expressed and regulated in nerve cells. For example, its expression in Purkinje cells of the cerebellum is down regulated by IGF-1,6 and increases during neuroprotection induced by Δ9-tetrahydrocannabinol in AF5 cells or by methamphetamine in human astroglia cells.7,8

14-3-3η forms part of Lewy bodies in Parkinson’s disease and is also linked to early onset schizophrenia.9 In addition, 14-3-3η is present in the CSF of patients with Creuzfeldt-Jakob disease as well as patients with other diseases such as Alzheimer’s and Herpes Simplex.10

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

