

PRODUCT INFORMATION



14-3-3 β (human, recombinant)

Item No. 44197

Overview and Properties

Synonyms: 14-3-3 Protein Beta/Alpha, KCIP-1, PKC Inhibitor Protein 1, Protein Kinase C Inhibitor Protein 1, Tyrosine 3-Monooxygenase/Tryptophan 5-Monooxygenase Activation Protein β , YWHAB

Source: Recombinant human 14-3-3 β expressed in *E. coli*

Amino Acids: 1-246 (full length)

Uniprot No.: P31946

Molecular Weight: 28 kDa

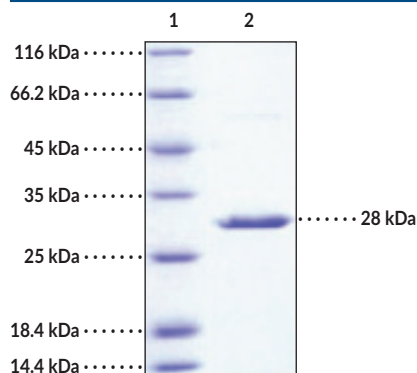
Storage: -80°C (as supplied)

Stability: \geq 1 year

Purity: \geq 90% estimated by SDS-PAGE

Supplied in: Lyophilized from sterile 20 mM Tris, pH 7.5, with 150 mM sodium chloride, 0.1 mM DTT, and 10% glycerol

Image



Lane 1: MW Markers
Lane 2: 14-3-3 β

SDS-PAGE Analysis of 14-3-3 β . This protein has a calculated molecular weight of 28 kDa.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

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Description

14-3-3 β is a member of the 14-3-3 family of scaffolding proteins.^{1,2} It is composed of nine antiparallel α -helices, which contain one phosphopeptide binding site, and forms homodimers or heterodimers with other 14-3-3 isoforms to form a central channel with two ligand-binding grooves. 14-3-3 β is ubiquitously expressed with the highest levels found in the brain.^{3,4} It is involved in diverse biological processes, including PKC activity regulation, axon regeneration, and cytoskeleton stabilization in podocytes.^{3,5,6} Increased intratumoral levels of 14-3-3 β are associated with increasing tumor grade in patients with astrocytoma.⁷ Increased cerebrospinal fluid (CSF) levels of 14-3-3 β are associated with Alzheimer's disease.⁸ Cayman's 14-3-3 β (human, recombinant) protein consists of 248 amino acids, has a calculated molecular weight of 28 kDa, and two additional amino acids, Gly and Pro, at the N-terminus.

References

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2. Boston, P.F., Jackson, P., Kynoch, P.A.M., *et al.* Purification, properties, and immunohistochemical localisation of human brain 14-3-3 protein. *J. Neurochem.* **38**, 1466-1474 (1982).
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6. Robinson, K., Jones, D., Patel, Y., *et al.* Mechanism of inhibition of protein kinase C by 14-3-3 isoforms. 14-3-3 isoforms do not have phospholipase A2 activity. *Biochem. J.* **299(3)**, 853-861 (1994).
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8. Qiang, Q., Skudder-Hill, L., Toyota, T., *et al.* CSF 14-3-3 β is associated with progressive cognitive decline in Alzheimer's disease. *Brain Commun.* **5(6)**, fcd312 (2023).

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