Human DCX Protein (aa 45-150, GST Tag)

Catalog Number: **13498-H09E**

General Information

Gene Name Synonym:

DBCN; DC; LISX; SCLH; XLIS

Protein Construction:

A DNA sequence encoding the human DCX (O43602-2) N-terminal fragment (Ala 45-Val 150) was fused with the GST tag at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 82 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Met

Molecular Mass:

The recombinant human DCX (aa 45-150)/GST chimera consists of 340 amino acids and has a predicted molecular mass of 39.4 kDa. It migrates as an approxiamtely 36 KDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 1mM DTT, 10% glycerol, pH 7.5

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

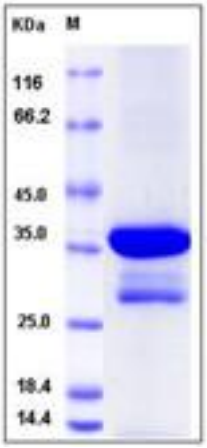
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

DCX (doublecortin, N-GST chimera)contains 2 doublecortin domains and belongs to the doublecortin family. It is highly expressed in neuronal cells of fetal brain, but not expressed in other fetal tissues. In the adult, it is highly expressed in the brain frontal lobe, but very low expression in other regions of brain, and not detected in heart, placenta, lung, liver, skeletal muscles, kidney and pancreas. DCX is a microtubule-associated protein required for initial steps of neuronal dispersion and cortex lamination during cerebral cortex development. It may act by competing with the putative neuronal protein kinase DCAMKL1 in binding to a target protein. DCX may in that way participate in a signaling pathway that is crucial for neuronal interaction before and during migration, possibly as part of a calcium ion-dependent signal transduction pathway. It may be part with LIS-1 of a overlapping, but distinct, signaling pathways that promote neuronal migration. Defects in DCX are the cause of lissencephaly X-linked type 1 and subcortical band heterotopia X-linked.

References

1.Des Portes V, *et al.* (1998) A novel CNS gene required for neuronal migration and involved in X-linked subcortical laminar heterotopia and lissencephaly syndrome. Cell. 92:51-61. 2.Gleeson J G, *et al.* (998) Doublecortin, a brain-specific gene mutated in human X-linked lissencephaly and double cortex syndrome, encodes a putative signaling protein. Cell. 92:63-72. 3.Ross M T, *et al.* (2005) The DNA sequence of the human X chromosome. Nature. 434:325-37.