Human NRG4 Protein

Catalog Number: **12183-HNCE**

General Information

Gene Name Synonym:

HRG4

Protein Construction:

A DNA sequence encoding the human NRG4 (Q8WWG1) extracellular domain (Pro 2-Phe 62) was expressed and purified, with additional two amino acids (Gly & Pro) at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 92 % 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: Gly

Molecular Mass:

The recombinant human NRG4 consists of 63 amino acids and has a calculated molecular mass of 6.7 KDa as estimated in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 50mM Tris, 50mM NaCl, pH 7.2

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:

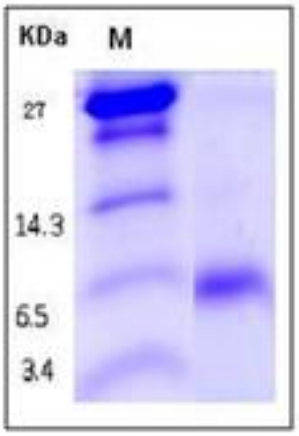
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

NRG4 (neuregulin 4) is a member of the neuregulin protein family. The neuregulins consist of four structurally-related proteins that are part of the EGF family of proteins. It has been shown that these proteins have diverse functions in the development of the nervous system and play multiple essential roles in vertebrate embryogenesis including: cardiac development, Schwann cell and oligodendrocyte differentiation, some aspects of neuronal development, as well as the formation of neuromuscular synapses. NRG4 contains 1 EGF-like domain. It activates type-1 growth factor receptors to initiating cell-to-cell signaling through tyrosine phosphorylation. NRG4 is a low affinity ligand for the ERBB4 tyrosine kinase receptor. It concomitantly recruits ERBB1 and ERBB2 coreceptors, resulting in ligand-stimulated tyrosine phosphorylation and activation of the ERBB receptors. However, it does not bind to the ERBB1, ERBB2 and ERBB3 receptors.

References

1.Strausberg RL, *et al.* (2002) Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. Proc Nat Acad Sci. 99(26):16899-903. 2.Harari D, *et al.* (1999) Neuregulin-4: a novel growth factor that acts through the ErbB-4 receptor tyrosine kinase. Oncogene. 18(17):2681-9. 3.Memon AA, *et al.* (2004) Expression of HER3, HER4 and their ligand heregulin-4 is associated with better survival in bladder cancer patients. Br J Cancer. 91(12) 2034-41.