

NRG4 Protein, Human, Recombinant

General Information

Synonyms:	HRG4;neuregulin 4
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. Predicted N terminal: Gly
Species:	Human
Expression Host:	E. coli
Accession:	Q8WWG1
Molecular Weight:	6.7 kDa (predicted); 6.7 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 92 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing 50 mM Tris, 50 mM NaCl, pH 7.2. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:	Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.
Stability & Storage:	It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots. <small>Actual storage temperature shall be subject to the COA.</small>

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

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.

Reference

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.

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.

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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel: 781-999-4286 E_mail: info@targetmol.com Address: 34 Washington Street, Wellesley Hills, MA 02481