

Human Neuregulin-1 (hNRG-1)



Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

| MW (kDa): | UniProt ID: | Entrez-Gene Id: |
|-----------|-------------|-----------------|
| 6 | #Q02297 | 3084 |

Background

NRG-1, a member of the EGF family, is involved in heart, mammary and nervous system development (1). NRG-1 is expressed by mammary epithelial, vascular endothelial and neuronal cells (2,3). At least 15 NRG-1 splice variants are known (1). These variants differ in EGF domains (α or β variants), amino-terminal splicing sites, and incorporation of exons encoding integral membrane regions (1). NRG-1 can induce or inhibit the proliferation of cells derived from breast cancer. The differences in effects of NRG-1 appear to depend on splice variation and interaction with receptor(s) (2). NRG-1 binds to ErbB3/HER3 or ErbB4/HER4. Binding induces dimerization with ErbB2/HER2. The Akt, Erk1/2 and Erk5 pathways have been shown to participate in NRG-1 activated signaling (4,5). NRG-1 appears to have roles in schizophrenia and breast cancer (1,4,6).

Endotoxin

Less than 0.01 ng endotoxin/1 μ g hNRG-1.

Purity

>98% as determined by SDS-PAGE of 6 μ g reduced (+) and non-reduced (-) recombinant hNRG-1. All lots are greater than 98% pure.

Source / Purification

Recombinant human NRG-1 (hNRG-1) Thr176-Lys238 (Accession #NP_001153480) was produced in *E. coli* cells at Cell Signaling Technology.

Bioactivity

The bioactivity of recombinant hNRG-1 was determined in a cell proliferation assay using MCF7 cells. The ED₅₀ of each lot is between 1-4 ng/ml.

Background References

1. Falls, D.L. (2003) *Exp Cell Res* 284, 14-30.
2. Chua, Y.L. et al. (2009) *Oncogene* 28, 4041-52.
3. Kalinowski, A. et al. (2010) *FASEB J* 24, 2567-75.
4. Montero, J.C. et al. (2008) *Clin Cancer Res* 14, 3237-41.
5. Grossmann, K.S. et al. (2009) *Proc Natl Acad Sci U S A* 106, 16704-9.
6. Mei, L. and Xiong, W.C. (2008) *Nat Rev Neurosci* 9, 437-52.

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with

respect to any third party products or services used by Customer in connection with the Products.