
MATERIAL DATA SHEET

Recombinant Human NEDD8 13C/15N-labeled

Cat. # UL-845

Neural Precursor Cell Expressed Developmentally Downregulated Gene 8 (NEDD8), also known as Related to Ubiquitin 1 (Rub1), is a 6-8 kDa member of the Ubiquitin family of proteins. Human pro-NEDD8 is 81 amino acids (aa) in length. Pro-NEDD8 contains one Ubiquitin-like domain (aa 1-65) and a 4-5 aa C-terminal propeptide (1,2). Cleavage of the propeptide exposes a C-terminal glycine residue that is used to generate a glycine-lysine intermolecular bond. Mature human NEDD8 shows 100% aa identity to NEDD8 from mouse, rat, and canine. Human NEDD8 is activated by a distinct NEDD8-activating (E1) enzyme, a heterodimeric complex composed of APPBP1 and UBA3 subunits (3). Activated NEDD8 is subsequently transferred to the UBE2M/Ubc12 or UBE2F NEDD8-conjugating (E2) enzymes (4). Through a process termed neddylation, the ROC1/Rbx1 RING Finger E3 ligase transfers NEDD8 to specific substrates (5). For example, transfer of NEDD8 to the Cullin scaffold activates members of the Cullin-RING Ligase (CRL) family of Ubiquitin ligases (E3) (6-8). CRL-induced ubiquitination is known to regulate proteins that are important for cell cycle progression and cell survival (9,10). Physiologically, NEDD8 plays a critical regulatory role in cell proliferation and dysregulation of the NEDD8 pathway has been associated with several cancer pathologies (11,12).

Product Information

Quantity:	100 µg
Source:	<i>E. coli</i> -derived human NEDD8 protein Accession # Q15843
Stock:	X mg/ml (X µM) in 50 mM HEPES pH 8.0, 150 mM NaCl, 0.5 mM EDTA, 1 mM DTT.
Purity:	>95%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain.

Use & Storage

Use: Mass spectrometry is commonly used to quantitate protein concentrations present in cells. Recombinant Human NEDD8-¹³C¹⁵N is ideal for use as an internal recovery standard. We recommend a Recombinant Human NEDD8-¹³C¹⁵N concentration of 1 µg per gram of protein lysate.

Storage: Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 48 months from date of receipt, -70 °C as supplied.
- 3 months, -70 °C under sterile conditions after opening.

Literature**References:**

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