

Recombinant Full Length Human NEDD8 Protein, Rhodamine 110 Labeled

Cat. No. NEDD8-02HFL Lot. No. (See product label)

SPECIFICATION

Product Overview	This product consists of a full-length, mature NEDD8 polypeptide recombinantly expressed in E. coli, conjugated on its c-terminus to a quenched Rhodamine 110 dye. Once hydrolyzed the free rhodamine provides excellent utility for real time assessment of enzyme activity at excitation (485 nm) and emission (535 nm).
Species	Human
Source	E.coli
ProteinLength	1-81aa
Description	NEDD8 (Neural Precursor Cell Expressed, Developmentally Down-Regulated 8) is a ubiquitin like protein that plays an important role in regulating development and the cell cycle. NEDD8 is conjugated to a target protein via a signaling cascade similar to ubiquitin: a NEDD8 specific E1 activating enzyme (APPBP1/UBA3) adenylates the c-terminus of NEDD8 which is then subsequently passed to an E2 conjugating enzyme (UBE2M or UBE2F) that facilitates covalent attachment of NEDD8 to a cullin subunit of an SCF E3 ubiquitin ligase.
Conjugation/Label	Rhodamine 110
Molecular Mass	8.9 kDa
Purity	>97% by LCMS

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Usage	Typical working range: 50-500nM
Applications	NEDD8-Rhodamine110 can be used as a substrate for enzymes exhibiting deNEDDylating activity, e.g UCH-L3, UCH-L1, COP9 Signalosome, and NEDP1.
Notes	For Research Use Only, Not For Use In Humans.
Storage	Store at -80 centigrade. Avoid multiple freeze/thaws.
Storage Buffer	50mM MES pH 6.0, 150mM NaCl
Concentration	170 µM, 1.5 mg/mL
Detection Method	Fluorescence
Substrate Properties	Protein-Based Substrate
Excitation/Emission (nm)	The Excitation and Emission of this substrate is 485nm and 535nm respectively.

GENE INFORMATION

Gene Name	NEDD8 neural precursor cell expressed, developmentally down-regulated 8 [Homo sapiens]
Official Symbol	NEDD8
Synonyms	NEDD8; neural precursor cell expressed, developmentally down-regulated 8; Nedd 8; neddylin; ubiquitin-like protein Nedd8; NEDD-8; FLJ43224; MGC104393; MGC125896; MGC125897;

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Gene ID 4738

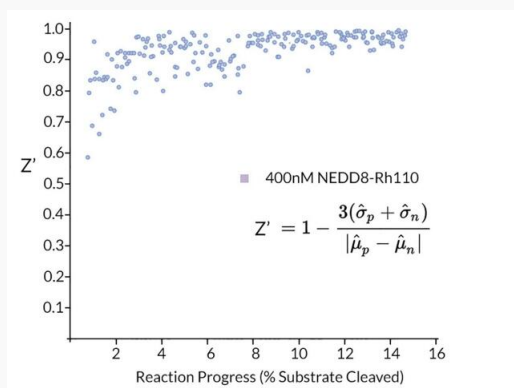
mRNA Refseq NM_006156

Protein Refseq NP_006147

MIM 603171

UniProt ID Q15843

**Robustness of
NEDD8-
Rhodamine110 in an
HTS format.**



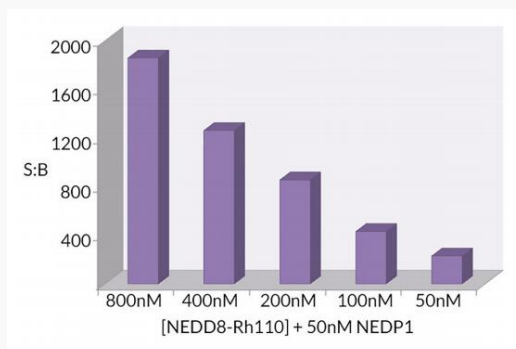
Fluorescent substrate NEDD8-Rhodamine 110 was incubated with and without 30 pM NEDP1 in a 384 well plate (n = 16), and progress curves were normalized to the maximum fluorescence signal to produce "% reaction progress". The Z" value, a statistical parameter widely used in the evaluation of screening assays, was calculated at each timepoint.

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Signal to Background



The signal to background ratio was determined by 100% hydrolysis of 800nM, 400nM, 200nM, 100nM, and 50nM NEDD8-Rhodamine 110 to liberate the quenched conjugate. Assay Buffer: 50mM HEPES pH7.5, 1mM TCEP, 0.1mg/ml BSA.

Mass Spectrometry Data

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