Active Recombinant Full Length Human NCL Protein, C-Flag-tagged

Cat. No. NCL-03HFL **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Full Length Human NCL Protein, fused to Flag-tag at C-terminus, was expressed in Mammalian cells.
Species	Human
Source	Mammalian Cells
Description	Nucleolin (NCL), a eukaryotic nucleolar phosphoprotein, is involved in the synthesis and maturation of ribosomes. It is located mainly in dense fibrillar regions of the nucleolus. Human NCL gene consists of 14 exons with 13 introns and spans approximately 11kb. The intron 11 of the NCL gene encodes a small nucleolar RNA, termed U20.
Form	25 mM Tris HCl, pH 7.3, 100 mM glycine, 10% glycerol.
Bio-activity	EMSA reaction positive control Taq polymerase assay (regulator) Binding assay (Dimethylsulfate footprinting) Binding assay (FRET) Surface Plasmon Ressonance (SPR) Association in cell culture Surface Plasmon Ressonance (SPR) EMSA reaction positive control

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	ELISA binding assay
Molecular Mass	76.4 kDa
AA Sequence	MVKLAKAGKNQGDPKKMAPPPKEVEEDSEDEEMSEDEEDDSSGEEVVIPQKKGKK AAATSAKKVVVSPTK KVAVATPAKKAAVTPGKKAAATPAKKTVTPAKAVTTPGKKG ATPGKALVATPGKKGAAIPAKGAKNGKNA KKEDSDEEEDDDSEEDEEDDEDEDED EDEIEPAAMKAAAAAPASEDEDDEDDEDDEDDDDEEDDSEEEA METTPAKGKKA AKVVPVKAKNVAEDEDEEEDDEDEDDDDDEDDEDDDDEDDEEEEEEEEEPVKEA PGKR KKEMAKQKAAPEAKKQKVEGTEPTTAFNLFVGNLNFNKSAPELKTGISDVFA KNDLAVVDVRIGMTRKFG YVDFESAEDLEKALELTGLKVFGNEIKLEKPKGKDSKKE RDARTLLAKNLPYKVTQDELKEVFEDAAEIR LVSKDGKSKGIAYIEFKTEADAEKTFE EKQGTEIDGRSISLYYTGEKGQNQDYRGGKNSTWSGESKTLVL SNLSYSATEETLQ EVFEKATFIKVPQNQNGKSKGYAFIEFASFEDAKEALNSCNKREIEGRAIRLELQGP RGSPNARSQPSKTLFVKGLSEDTTEETLKESFDGSVRARIVTDRETGSSKGFGFVDF NSEEDAKAAKEAM EDGEIDGNKVTLDWAKPKGEGGFGGRGGGRGGFGGRGGGR GGRGGFGGRGRGGFGGRGGFRGGRGGGGDH KPQGKKTKFETRTRPLEQKLISEEDLAANDILDYKDDDDKV
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining.
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade.
Concentration	>50 ug/mL as determined by microplate BCA method.
Preparation	Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Protein Families	Druggable Genome, Stem cell - Pluripotency
Protein Pathways	Pathogenic Escherichia coli infection
Full Length	Full L.

GENE INFORMATION

Gene Name	NCL nucleolin [Homo sapiens (human)]
Official Symbol	NCL
Synonyms	C23; Nsr1
Gene ID	4691
mRNA Refseq	NM_005381.3
Protein Refseq	NP_005372.2
MIM	164035
UniProt ID	P19338

EMSA analysis of nucleolin (NCL) binding to telomeric sequences (GGGTTA)n or (GGGTTT)n to form NCL/Gquadruplexes (G4s) complex (where n = 4, 6 and 8). Lanes 1 - 3 are control reactions without NCL.

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	Taq polymerase stop assays were used to assess the stabilization imparted by NCL to wild-type (wt) and mutant M4+5 LTRII+III+IV (M4+5) sequences. Taq polymerization was performed in the presence/absence of K+ and NCL. Amplification of the wt template was performed at 37 centigrade and 47 centigrade; elongation was obtained at 37 centigrade on the mutant template. The * symbol highlights stop regions.
	Dimethylsulfate protection analysis of the complex between NCL and LTR sequence oligonucleotides. A densitogram shown on the right quantifies band cleavage intensity: red and blue lines correspond to the LTR and NCL/LTR complex, respectively. G-tracts and their numbering are indicated on the left. The two gel portions derive from a single gel run.
	FRET melting analysis of the stabilization of NCL on the different length G4 LTR sequences.The results showed that NCL conferred the highest stabilization in the series to the LTR-II+III+IV construct, followed by LTR-III+IV. Progressively lower stabilization was observed for LTR-III and LTR-II, whereas LTR-IV was the least affected in the series. The negative control bovine serum albumin (BSA) did not afford any detectable stabilization to the selected sequences.
	SPR binding analysis of wild-type (wt) LTR-II+III+IV to immobilized NCL. Oligonucleotide concentration range was 31.25 nM - 2000 nM. Sensograms are shown as gray lines and their respective fits as black lines.

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	EMSA analysis of the binding of increasing amounts of purified NCL to the HIV-1 LTR-II+III+IV G-quadruplexes (LTR G4). The vertical bar highlights the portion of the gel where the two NCL/LTR G4 complex bands are observed.
	Surface plasmon resonance (SPR) plots of AS1411 (concentrations 15.6, 31.2, 62.5, 125, 250, 500 and 1000 nM) interactions with nucleolin. AS1411 showed a dose-dependent interaction with NCL (KD = 34.2 nM) with fast association rates.
	Coomassie blue staining of purified NCL protein.

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA