

Figure S1. The box plot of pan-cancer perspective on nucleolin (NCL) expression level by TCGA. Solus expression level of NCL across TCGA tumors (a) and compare to normal samples (light gray boxes) (b). BRCA: breast invasive carcinoma; COAD: colon adenocarcinoma; HNSC: head and neck squamous cell carcinoma; THCA: Thyroid carcinoma; PAAD: pancreatic adenocarcinoma; STAD; stomach adenocarcinoma; TGCT: testicular germ cell tumor; LUAD: lung adenocarcinoma, ACC: Adrenocortical carcinoma; BLCA: Bladder Urothelial Carcinoma; CESC: Cervical squamous cell carcinoma and endocervical adenocarcinoma; CHOL: Cholangio carcinoma; DLBC: Lymphoid Neoplasm Diffuse Large B-cell Lymphoma; ESCA: Esophageal carcinoma;; GBM: Glioblastoma multiforme; KICH: Kidney Chromophobe; KIRC: Kidney renal clear cell carcinoma; KIRP: Kidney renal papillary cell carcinoma; LAML: Acute Myeloid Leukemia; LGG: Brain Lower Grade Glioma; LIHC: Liver hepatocellular carcinoma; LUSC: Lung squamous cell carcinoma; MESO: Mesothelioma; OV: Ovarian serous cystadenocarcinoma; PCPG: Pheochromocytoma and Paranglioma; PRAD: Prostate adenocarcinoma; READ: Rectum adenocarcinoma; SARC: Sarcoma; SKCM: Skin Cutaneous Melanoma; THYM: Thymoma; UCEC: Uterine Corpus Endometrial Carcinoma UCS: Uterine Carcinosarcoma UVM: Uveal Melanoma

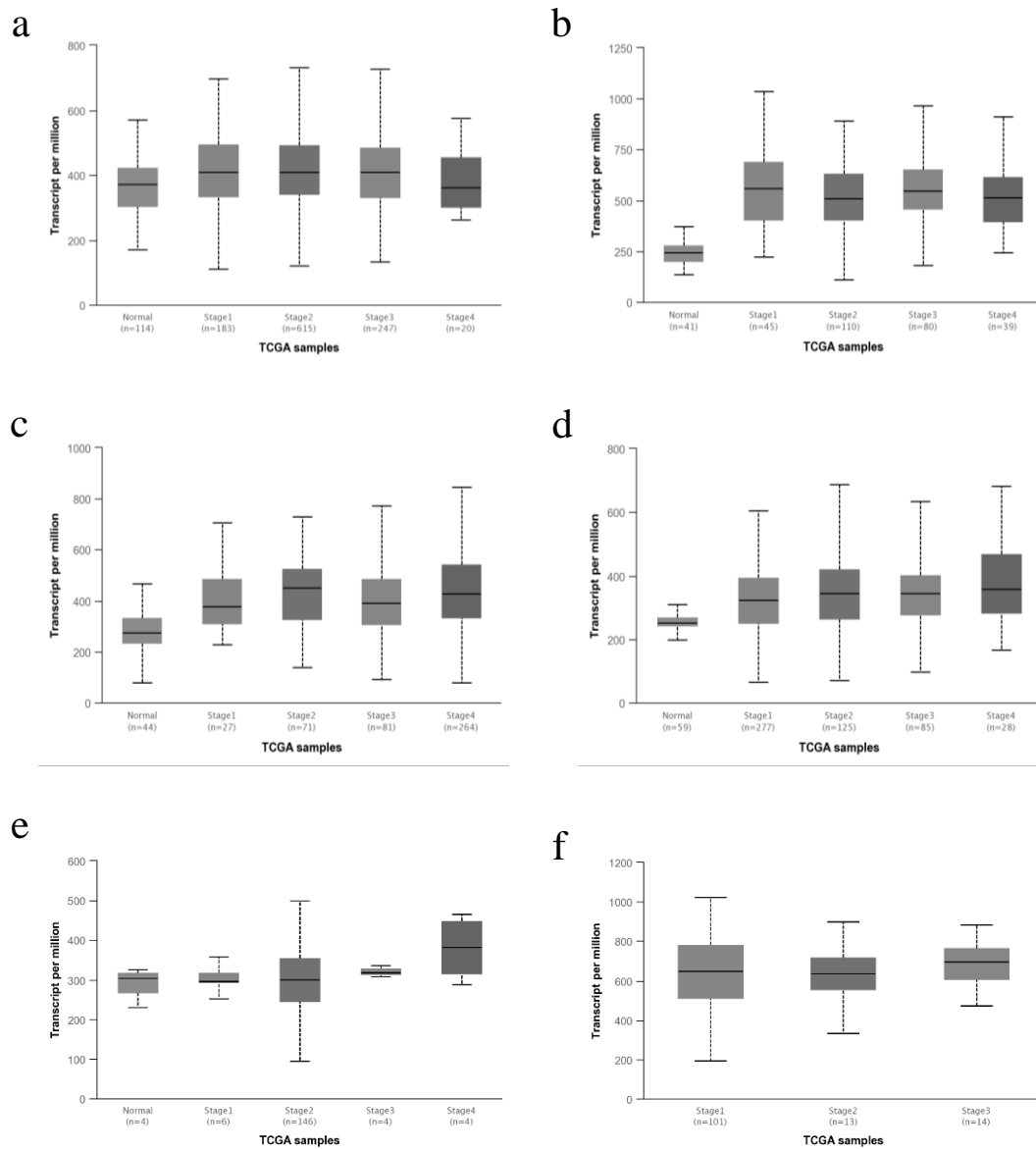


Figure S2. The stage plot of the expression level of the NCL in cancers with various stages compared to normal tissues by UALCAN. BRCA: breast invasive carcinoma (a); COAD: colon adenocarcinoma (b); HNSC: head and neck squamous cell carcinoma (c); LUAD: lung adenocarcinoma (d); PAAD: pancreatic adenocarcinoma (e); TGCT: testicular Germ Cell Tumors (f)

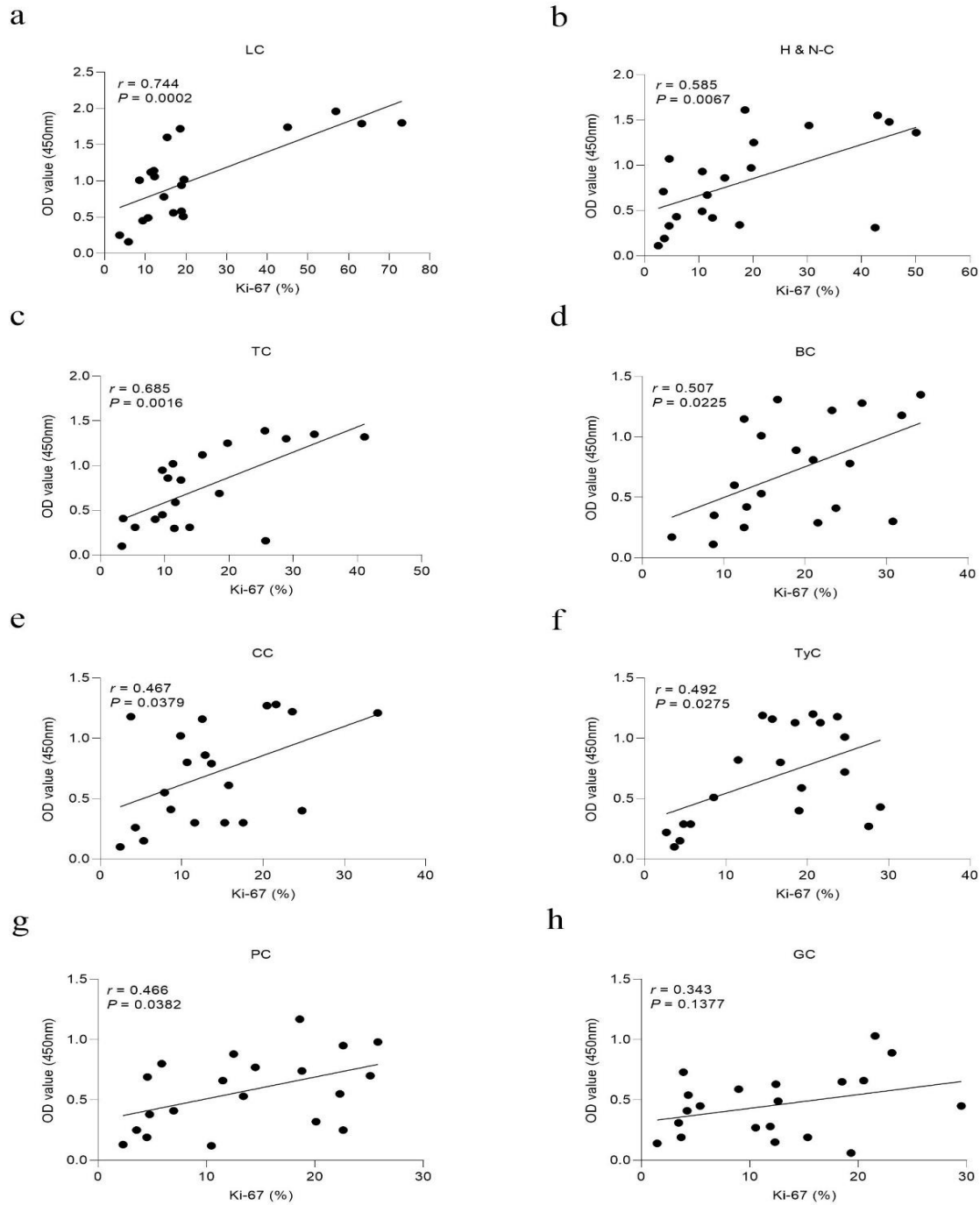


Figure S3. Correlation of autoantibody (AAb) to recombinant RNA binding domains of nucleolin (rRBDs-NCL) protein with Ki-67. Scatter graph for serum levels of anti-NCL in Ki-67 positive (%) tissues. Pearson's test was used to evaluate the correlation of AAb level with Ki-67. LC: lung cancer; H & N-C: head and neck cancer; TC: testis cancer; TyC: thyroid cancer; BC: breast cancer; CC: colon cancer; PC: pancreatic cancer; GC: gastric cancer

Table S1. Association between clinicopathological features and immunoreactivity of cancer sera to recombinant RNA binding domains of nucleolin (rRBDs-NCL)

Groups	LC	H & N-C	TC	BC	CC	TyC	PC	GC
Sex								
Male	1.389±0.219	1.124±0.156	1.065±0.209	-	0.832±0.098	0.687±0.012	0.441±0.207	0.554±0.119
Female	1.417±0.198	1.135±0.093	-	0.913±0.006	0.797±0.003	0.702±0.043	0.462±0.235	0.576±0.176
^a <i>p</i> value	0.1122	0.1325	-	-	0.1147	0.1707	0.6314	0.6630
Age								
< 60	1.583±0.387	1.078±0.084	1.118±0.088	0.889±0.018	0.751±0.124	0.887±0.106	0.541±0.202	0.732±0.121
≥ 60	1.467±0.090	1.064±0.112	1.114±0.240	0.863±0.224	0.739±0.098	0.787±0.171	0.445±0.178	0.676±0.056
^a <i>p</i> value	0.8420	0.0591	0.1982	0.0505	0.1794	0.9950	0.4547	0.1647
Tumor size								
< 3 cm	0.372±0.140	0.213±0.095	0.415±0.262	0.573±0.260	0.538±0.392	0.656±0.394	0.523±0.282	0.433±0.242
≥ 3 cm	1.254±0.454	0.848±0.394	0.983±0.357	0.783±0.452	0.879±0.346	0.772±0.355	0.690±0.308	0.580±0.291
^a <i>p</i> value	0.0007***	0.0190*	0.0018**	0.3258	0.0663	0.6165	0.2796	0.3874
TNM staging								
(1/2)	0.805±0.488	0.570±0.370	0.543±0.363	0.615±0.371	0.624±0.408	0.554±0.431	0.506±0.272	0.409±0.274
(3/4)	1.376±0.460	1.137±0.413	0.969±0.374	0.877±0.429	0.811±0.381	0.805±0.293	0.628±0.310	0.502±0.226
^a <i>p</i> value	0.0231*	0.0067**	0.0249*	0.1862	0.3340	0.1663	0.3944	0.4432
Differentiation								
Poor	1.443±0.087	1.134±0.095	1.212±0.342	0.409±0.128	0.756±0.083	1.089±0.079	0.586±0.083	0.537±0.451
Moderate, high	1.455±0.141	1.124±0.179	1.223±0.001	0.411±0.099	0.773±0.121	1.092±0.118	0.577±0.016	0.521±0.089
^a <i>p</i> value	0.1432	0.0954	0.9854	0.5416	0.6321	0.3474	0.7625	0.07341
Ki 67								
< 20%	1.415±0.031	1.024±0.018	0.995±0.017	0.481±0.089	0.663±0.198	0.583±0.056	0.491±0.123	0.578±0.058
≥ 20%	1.981±0.017	1.571±0.024	1.301±0.123	0.686±0.015	0.856±0.041	0.885±0.102	0.779±0.114	0.732±0.113
^a <i>p</i> value	0.0054**	0.0457*	0.0202*	0.0390*	0.0385*	0.0272*	0.0362*	0.0935
P53 mutation								
Positive	1.356±0.032	1.293±0.144	1.098±0.234	0.801±0.011	0.765±0.015	0.976±0.145	0.596±0.089	0.753±0.018
Negative	1.521±0.039	1.287±0.073	1.085±0.012	0.875±0.056	0.873±0.019	0.882±0.015	0.586±0.015	0.698±0.154
^a <i>p</i> value	0.4550	0.3489	0.4677	0.5599	0.9605	0.9440	0.2328	0.0881

CK7								
Positive	1.398±0.376	1.195±0.105	–	0.842±0.089	0.676±0.018	–	0.723±0.035	0.892±0.003
Negative	1.491±0.345	1.116±1.116	0.984±0.115	–	0.701±0.059	0.918±0.134	0.724±0.008	0.856±0.015
^a p value	0.3333	0.4818	–	–	0.2391	–	0.2588	0.1685
ER rate								
< 1%	0.987±0.231	0.845±0.098	0.974±0.012	0.653±0.197	0.514±0.014	0.893±0.231	0.593±0.003	0.635±0.032
≥ 1%	0.951±0.059	0.851±0.001	0.956±0.015	0.775±0.297	0.497±0.184	0.901±0.003	–	0.659±0.012
^a p value	0.8423	0.8457	0.1301	0.0364 [*]	0.8394	0.5492	–	0.1851
PR rate								
< 20%	0.796±0.237	0.618±0.014	0.789±0.008	0.492±0.265	0.487±0.149	0.509±0.026	0.534±0.087	0.516±0.001
≥ 20%	0.804±0.154	0.621±0.123	–	0.513±0.165	–	0.516±0.188	0.476±0.112	–
^a p value	0.7672	0.0871	–	0.1695	–	0.1982	0.0502	–