

Supporting information

**Smart Cancer-Targeting and Super-Sensitive Sensing of  
 $\text{Eu}^{3+}/\text{Tb}^{3+}$ -Induced Hyaluronan Characteristic  
Nanomicelles with Effective Drug Loading and Releasing**

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Figure S2: (a) UV absorption curves of DTIC with different concentrations. (b) UV absorption curves of a set of DTIC in vitro release solution. (c) UV absorption-concentration curves of DTIC.

Figure S3: In the malignant melanoma animal model, a continuous intratumorally injection of PBS buffer (1), ENMs (2), TNMs (3), ENMs loaded with DTIC (4), TNMs loaded with DTIC (5), and free drugs (6) was administered for 10 days. Photographs of tumors from six sample groups

Table S1: Relative tumor volume & Tumor Growth Inhibition value

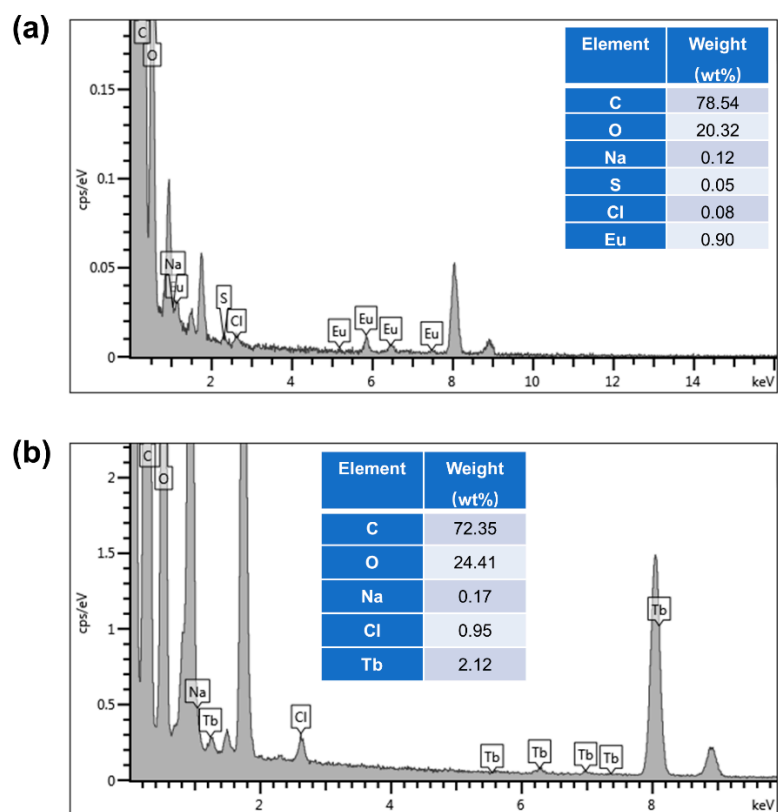


Figure S1

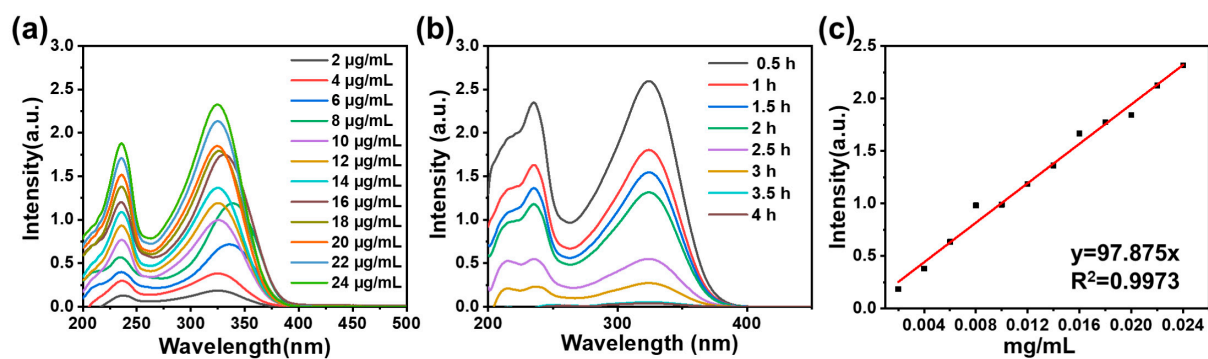
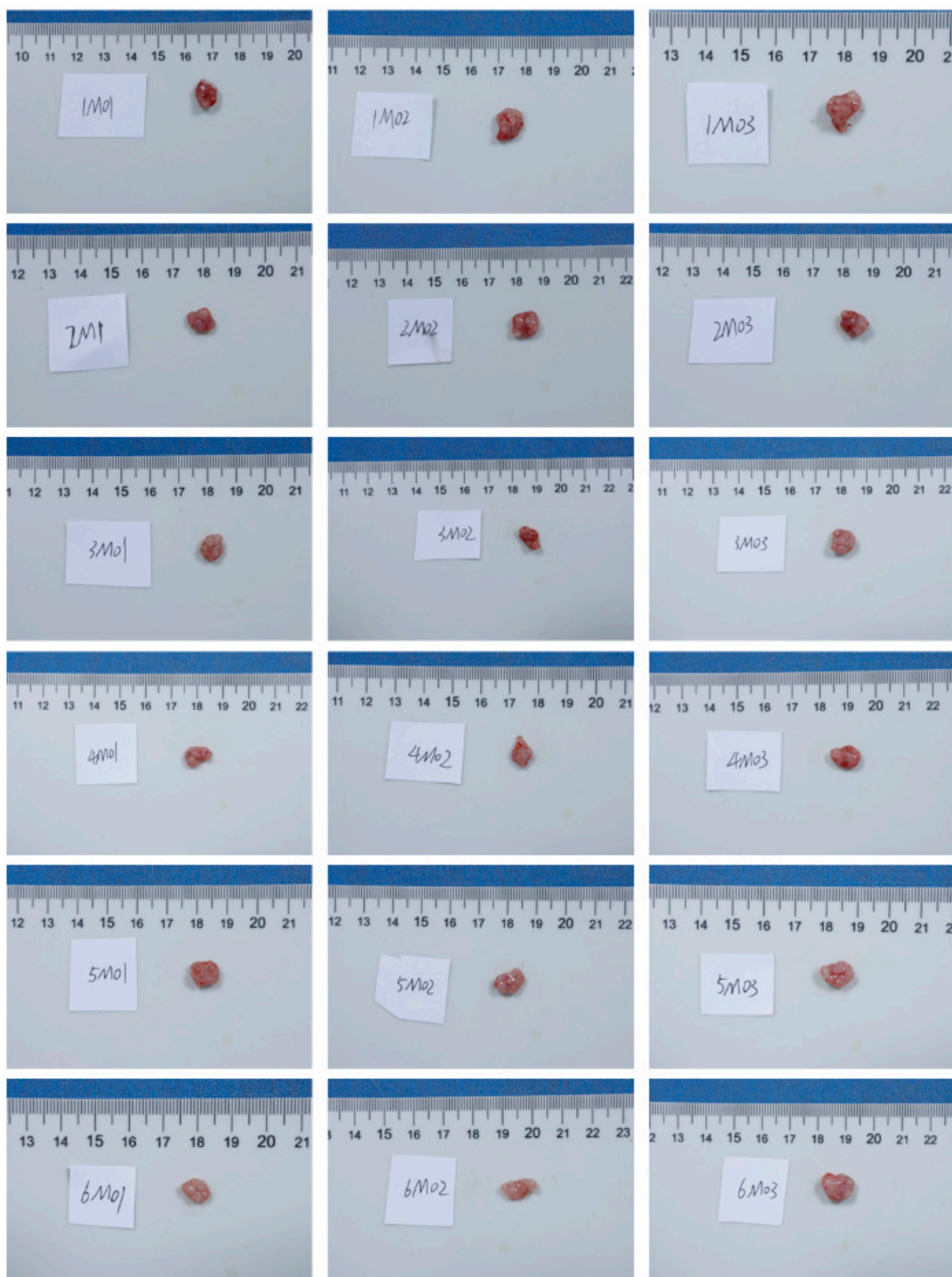


Figure S2



**Figure S3**

Relative tumor volume & Tumor Growth Inhibition value												
Control												
Group \ Incubation days	0	1	2	3	4	5	6	7	8	9	10	
1M01	1	1.121	1.706	1.833	1.897	2.037	2.083	2.364	2.813	3.449	3.789	
1M02	1	1.158	1.547	1.659	1.784	2.126	2.198	3.007	4.16	5.09	5.876	
1M03	1	1.046	1.047	1.213	1.632	1.852	2.173	2.494	3.514	3.669	4.029	
Mean	1	1.108	1.433	1.568	1.771	2.005	2.151	2.622	3.496	4.069	4.565	
SD	0	0.047	0.281	0.261	0.109	0.114	0.049	0.278	0.55	0.727	0.932	
TGI	/	/	/	/	/	/	/	/	/	/	/	
ENMs												
Group \ Incubation days	0	1	2	3	4	5	6	7	8	9	10	
2M01	1	1.014	1.153	1.214	1.346	1.511	1.817	2.177	2.701	2.911	3.575	
2M02	1	1.016	1.178	1.299	1.388	1.793	1.955	2.137	3.241	3.413	4.475	
2M03	1	1.017	1.13	1.178	1.229	1.369	1.721	1.709	1.96	2.204	3.162	
Mean	1	1.016	1.154	1.23	1.321	1.558	1.831	2.008	2.634	2.843	3.737	
SD	0	0.001	0.02	0.051	0.067	0.176	0.096	0.212	0.525	0.496	0.548	
TGI	0	0.084	0.195	0.215	0.254	0.223	0.149	0.234	0.247	0.301	0.181	
TNMs												
Group \ Incubation days	0	1	2	3	4	5	6	7	8	9	10	
3M01	1	1.006	1.08	1.18	1.254	1.401	1.49	1.534	1.757	2.35	3.319	
3M02	1	1.005	1.18	1.177	1.179	1.32	1.322	1.76	2.048	2.207	3.032	
3M03	1	1.009	1.033	1.101	1.148	1.368	1.902	2.509	2.808	3.481	4.831	
Mean	1	1.007	1.098	1.153	1.194	1.363	1.571	1.934	2.204	2.68	3.727	
SD	0	0.002	0.061	0.037	0.045	0.033	0.244	0.417	0.443	0.57	0.789	
TGI	0	0.092	0.234	0.265	0.326	0.32	0.27	0.262	0.369	0.341	0.183	
ENMs + DTIC												
Group \ Incubation days	0	1	2	3	4	5	6	7	8	9	10	
4M01	1	1.106	1.106	1.228	1.176	1.7	1.596	1.669	2.261	2.435	3.941	
4M02	1	1	1.046	1.019	0.974	1.012	1.174	1.517	1.923	2.26	3.171	
4M03	1	1.053	1.122	1.223	1.267	1.482	1.615	1.815	2.422	2.759	3.263	
Mean	1	1.053	1.091	1.156	1.139	1.398	1.462	1.667	2.202	2.485	3.458	
SD	0	0.043	0.032	0.097	0.122	0.287	0.204	0.122	0.208	0.207	0.344	
TGI	0	0.05	0.238	0.263	0.357	0.303	0.321	0.364	0.37	0.389	0.242	
TNMs + DTIC												
Group \ Incubation days	0	1	2	3	4	5	6	7	8	9	10	
5M01	1	1.044	1.13	1.322	1.362	1.601	1.669	2.218	2.421	3.177	3.407	
5M02	1	1.037	1.094	1.281	1.221	1.431	1.558	1.725	2.028	2.3	3.032	
5M03	1	0.971	1.039	1.1	1.101	1.267	1.176	1.456	1.986	2.554	3.159	
Mean	1	1.017	1.088	1.235	1.228	1.433	1.468	1.8	2.145	2.677	3.199	
SD	0	0.033	0.037	0.096	0.107	0.136	0.211	0.316	0.196	0.369	0.156	
TGI	0	0.082	0.241	0.213	0.306	0.285	0.318	0.314	0.386	0.342	0.299	
DTIC												
Group \ Incubation days	0	1	2	3	4	5	6	7	8	9	10	
6M01	1	0.999	1.143	1.259	1.328	1.608	1.842	2.629	3.051	3.547	4.076	
6M02	1	1.01	1.12	1.177	1.239	1.509	1.621	2.003	2.614	3.408	3.808	
6M03	1	1.124	1.336	1.423	1.5	1.713	2.082	2.155	2.571	2.776	3.198	
Mean	1	1.045	1.2	1.286	1.356	1.61	1.848	2.262	2.746	3.243	3.694	
SD	0	0.057	0.097	0.102	0.108	0.083	0.188	0.266	0.217	0.335	0.367	
TGI	0	0.058	0.163	0.18	0.235	0.197	0.141	0.137	0.215	0.203	0.191	

**Table S1**