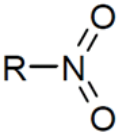
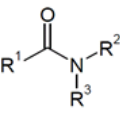
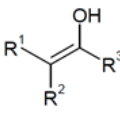
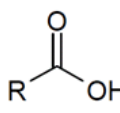
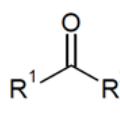
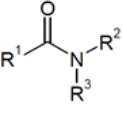
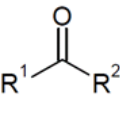
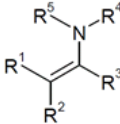
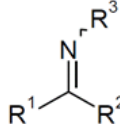
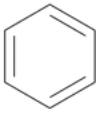
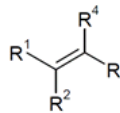
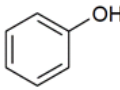
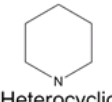
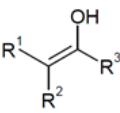
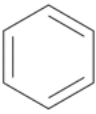
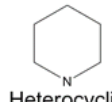
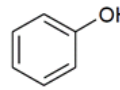
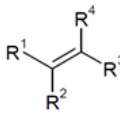
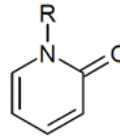
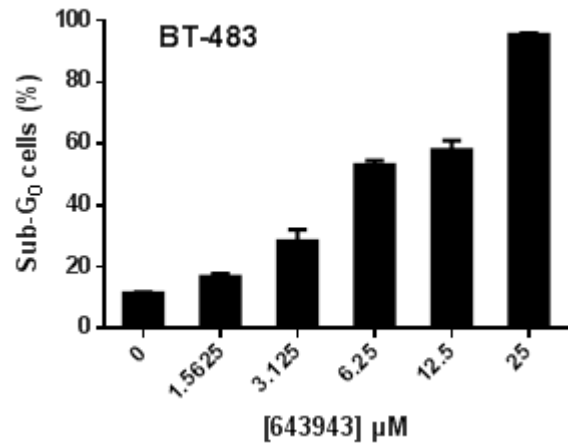
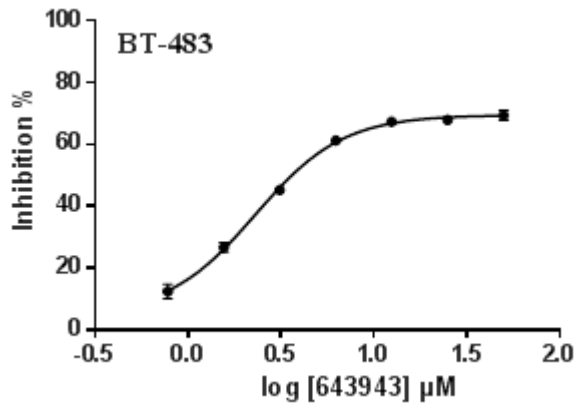


Supplementary Figure 1. Virtual Screening Strategy and Site-moiety Maps for Identifying the PPI Inhibitor. (A) The hot spot around Cys246 of CASP7 and (B) the site with four amino acids shown was used for virtual screening to identify the PPI inhibitor. (C) Compound library (Sigma-Aldrich) was screened using GEMDOCK and top-ranking 5000 compounds were selected for generating (D) residue-compound interaction profiles. Site-moiety map for CASP7 with XIAP (E) and that for free CASP7 (F) were derived based on conserved interactions between binding pockets and chemical moieties. (G) A common site-moiety-map was identified. (H) Compound candidates based on rank-based consensus scores combining energy-based and anchor-based ranks were selected for bioassay.

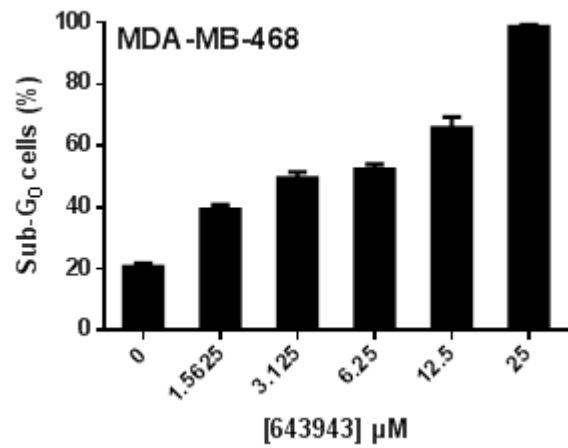
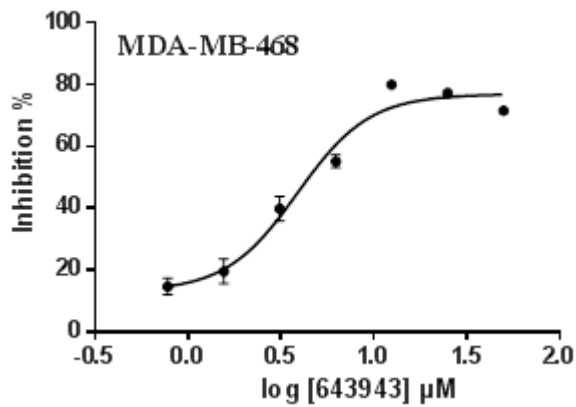
Anchor	Pocket		Moiety (functional group)					
<input checked="" type="checkbox"/> H1 553 compounds	K	92	 20%	 12%	 7%	 7%	 6%	others 47%
	D	93						
	R	237						
<input checked="" type="checkbox"/> H2 595 compounds	Q	243	 31%	 15%	 10%	 10%	R-OH 5%	others 29%
	S	247						
<input checked="" type="checkbox"/> V1 508 compounds	A	96	 Aromatic moiety 41%	 11%	 6%	 Heterocyclic moiety 5%	 4%	others 33%
	C	246						
	E	250						
<input checked="" type="checkbox"/> V2 864 compounds	Q	243	 Aromatic moiety 35%	 Heterocyclic moiety 11%	 8%	 8%	 4%	others 33%
	R	268						
	F	273						

Supplementary Figure 2. The chemical moieties of common site-moiety-maps. The moiety compositions of four consensus anchors on the binding modes 1 (with linker-BIR2 of XIAP) and 2 (without XIAP) located at the **643943** binding site of CASP7. These results were produced by SiMMap.

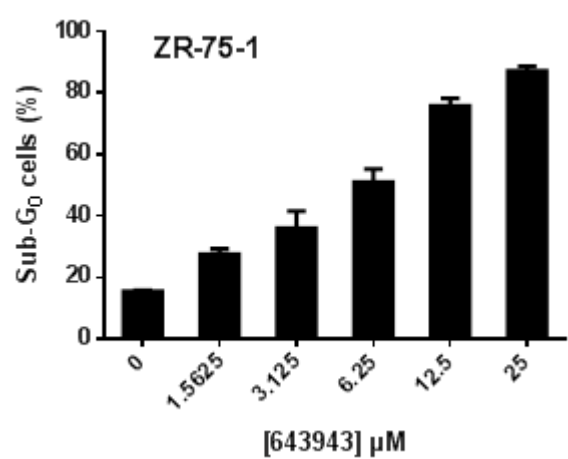
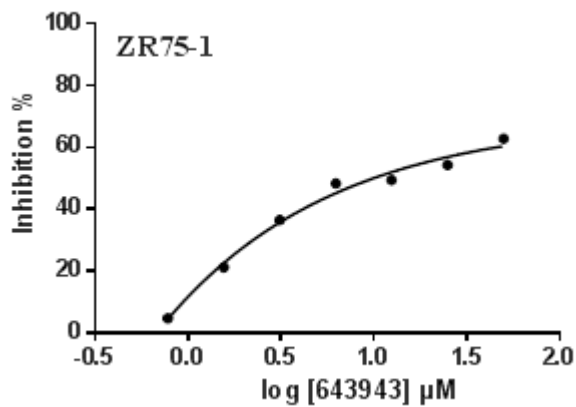
A



B



C



Supplementary Figure 3. The MTT assay and flow-cytometric assays for **643943** on the cell growth inhibition of BT-483 (A), MDA-MB-468 (B) and ZR-75-1 (C). Data were obtained from three independent experiments.