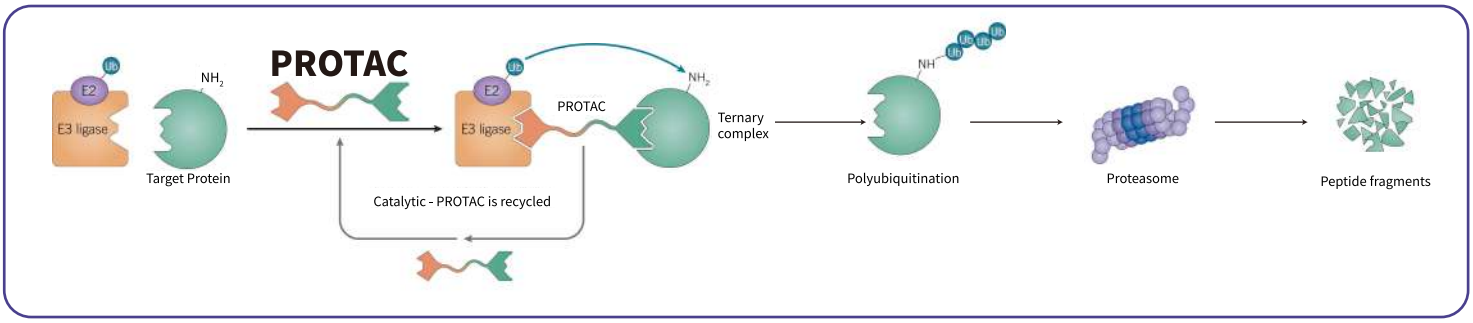
타겟 단백질 분해 Platform

PROTAC® 이라 알려진 Targeted Protein Degratation(TPD)기술은 질병 관련 표적 단백질을 유비퀴틴화(Ubiguitin-proteasome System, UPS)를 통해 선택적으로 분해하는 방법으로 떠오르고 있는 기술입니다.
기존에 접근할 수 없었던(undruggable) 질병 타겟 단백질 뿐만아니라 개발된 약물의 내성을 극복할 수 있는 전략으로도 대두되고 있습니다.



Active Degraders

biotechne에서 제시하는 완제품 Degrader들을 만나보세요.

PROTACs

- Easy of use
- Applicable to multiple cell Lines
- Duration of effect is adjustable

Product Name	Catalog #	Target Protein	Action
AT 1	6356	BRD4	Selectively degrades BRD4, with negligible loss of BRD2 and BRD3; most selective BRD4 Degrader available*
BSJ-03-123	6921	Cdk6	Selective Cdk6 degrader**
BSJ-03-204	6938	Cdk4/6	Selective Cdk4/6 degrader; induces G cell-cycle arrest and inhibits proliferation of a mantle cell lymphoma cell line**
CM 11	6416	pVHL30	Homo-PROTAC for self-degradation of the long form of VHL, pVHL30*
	6948	CRBN	Potent and selective cereblon degrader; induces complete degradation of cereblon in MM1S cells; cell-permeable
dBET1	6327	BET bromodomains	Depletes BET bromodomains in cancer cell lines *in vitro* and downregulates MYC in mice bearing human AML xenografts**
dBRD9	6606	BRD9	Potent and selective BRD9 degrader**
dTRIM 24	6607	TRIM24	Degrader targeting TRIM24; demonstrates antiproliferative effects in MOLM-13 cells**
MZ 1	6154	BRD4	Selectively degrades BRD4 over BRD2 and BRD3; exhibits potent antiproliferative and cytotoxic effects in AML cell lines*
THAL SNS 032	6532	Cdk9	Potently and selectively degrades Cdk9**
TL 12-186	6524	Multikinase	Multikinase degrading PROTAC; degrades a range of kinases *in vitro* **
TL 13-112	6745	ALK	Selective ALK Degrader; inhibits proliferation of ALK+ cancer cell lines**
TL 13-12	6744	ALK	Exhibits higher selectivity for ALK over Aurora A kinase compared with TL 13-112 (Cat.No. 6745)
ZXH 3-26	6713	BRD4	Potent and selective BRD4 degrader**
VZ 185	6936	BRD7/9	Potent and selective BRD719 Degrader

*Sold under license from the University of Dundee, UK ** Sold under license from the Dana-Farber Cancer Institute, USA

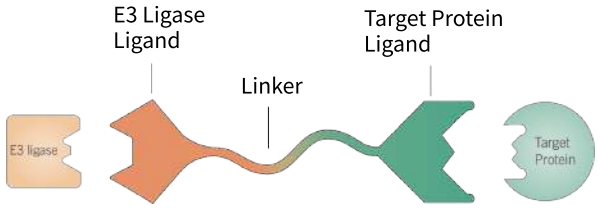
Degrader Negative Controls		
Product Name	**Catalog #**	**Action**
BSJ-Bump	6922	Negative control for BSJ-03-123
cis MZ 1	6155	Negative control for MZ 1
CMP 98	6417	Negative control for CM11
TL 13-110	6746	Negative control for TL 13-112
TL 13-22	6747	Negative control for TL 13-12
TL 13-27	6525	Negative control for TL 12-186

*구조동일 Activity 없는 Negative Control 함께 사용하세요!

Degrader Building Blocks

내 타겟에 맞춰 내가 Degrader를 디자인 하자!

- E3 Ligase Ligand Choice!
- Linker Type Choice!
- Linker Conjugation Type Choice!

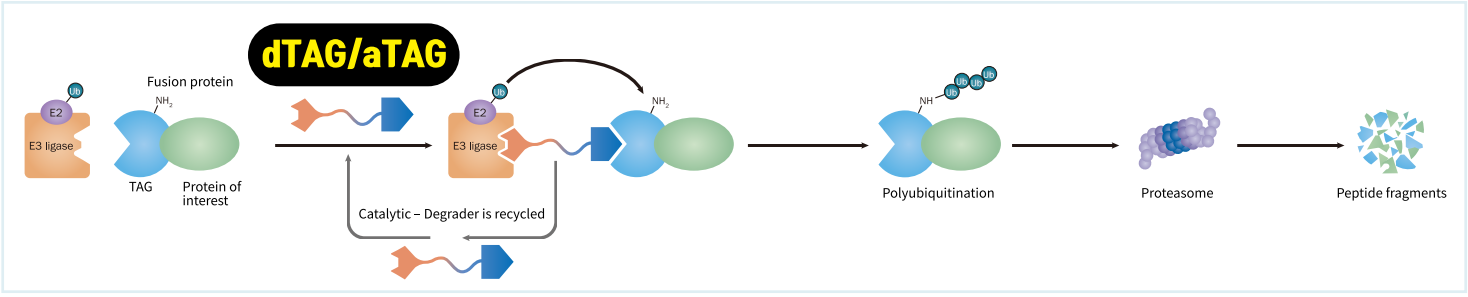


Cat #	Products	E3 Ligase	Linker Type	No. of Units	Conjugation Functionality
Cereblon Targeting Ligands Plus Linkers					
6637	Pomalidomide 4'-PEG2-amine	-	PEG	2	Amine
6681	Pomalidomide 4'-PEG3-acid	-	PEG	3	Carboxylic Acid
6682	Pomalidomide 4'-alkylC5-acid	-	Alkyl	5	Carboxylic Acid
6851	Pomalidomide 4'-alkylC2-amine	-	Alkyl	2	Amine
6716	Pomalidomide 4'-alkylC5-amine	-	Alkyl	5	Amine
6944	Pomalidomide 4'-alkylC8-amine	-	Alkyl	8	Amine
6963	Pomalidomide 4'-PEG4-amine	-	PEG	4	Ethylamine
6467	Thalidomide 4'-oxyacetamide-PEG3-amine	-O-CH2-Amide	PEG	3	Amine
6468	Thalidomide 4'-oxyacetamide-PEG4-amine	-O-CH2-Amide	PEG	4	Amine
6469	Thalidomide 4'-oxyacetamide-alkylC4-amine	-O-CH2-Amide	Alkyl	4	Amine
6627	Thalidomide 4'-ether-alkylC6-amine	-O-	Alkyl	6	Amine
6686	Thalidomide 4'-ether-PEG2-alkyne	-O-	PEG	2	Alkyne
6850	Thalidomide 4'-ether-alkylC2-amine	-O-	Alkyl	2	Amine
6917	Thalidomide 4'-ether-alkylC4-amine	-O-	Alkyl	4	Amine
6949	Thalidomide 4'-oxyacetamide-alkylC2-amine	-O-CH2-Amide	Alkyl	2	Amine
6950	Thalidomide 4'-ether-PEG3-amine	-O-	PEG	3	Ethylamine
6951	Thalidomide 4'-ether-PEG5-amine	-O-	PEG	5	Ethylamine
6966	Thalidomide 4'-oxyacetamide-PEG1-amine	-O-CH2-Amide	PEG	1	Ethylamine
6967	Thalidomide 4'-oxyacetamide-PEG2-amine	-O-CH2-Amide	PEG	2	Ethylamine
6968	Thalidomide 4'-oxyacetamide-alkylC6-amine	-O-CH2-Amide	Alkyl	6	Amine
6946	Thalidomide 4'-oxyacetamide-alkylC8-amine	-O-CH2-Amide	Alkyl	2	Amine
6300	Thalidomide 4'-oxyacetamide-alkylC4-azide	-O-CH2-Amide	Alkyl	8	Amine

Cat #	Products	E3 Ligase Exit Vector	Linker Type	No. of Units	Conjugation Functionality
VHL Targeting Ligands Plus Linkers					
6463	VH 032 amide-PEG3-amine	-Amide-CH2-	PEG	3	Amine
6464	VH 032 amide-PEG4-amine	-Amide-CH2-	PEG	4	Amine
6465	VH 032 amide-alkylC4-amine	-Amide-	Alkyl	4	Amine
6679	VH 032 amide-PEG3-acid	-Amide-CH2-	PEG	3	Carboxylic Acid
6680	VH 032 amide-alkylC4-acid	-Amide-	Alkyl	4	Carboxylic Acid
6684	VH 032 amide-PEG2-alkyne	-Amide-CH2-	PEG	2	Alkyne
6852	VH 032 amide-alkylC2-amine	-Amide-	Alkyl	2	Amine
6853	VH 032 amide-alkylC6-amine	-Amide-	Alkyl	6	Amine
6879	VH 032 amide-PEG1-amine	-Amide-CH2-	PEG	1	Amine
6880	VH 032 amide-alkylC10-amine	-Amide-	Alkyl	10	Amine
6890	VH 032 amide-alkylC8-amine	-Amide-	Alkyl	8	Amine
6907	VH 032 amide-PEG2-amine	-Amide-CH2-	PEG	2	Amine
6985	VH 032 amide-alkylC5-amine	-Amide-	Alkyl	5	Amine
7074	VH 032 amide-alkylC7-amine	-Amide-	Alkyl	7	Amine
6909	VH 032 phenol-alkylC4-amine	- Phenol-	Alkyl	4	Amine
6910	VH 032 phenol-alkylC6-amine	- Phenol-	Alkyl	6	Amine
IAP Targeting Ligands Plus Linkers					
6474	A 410099.1 amide-alkylC4-amine	-Amide-	Amide-Alkyl	4	Amine
6473	A 410099.1 amide-PEG2-amine	-Amide-	Amide-PEG	2	Amine
6472	A 410099.1 amide-PEG3-amine	-Amide-	Amide-PEG	3	Amine

TAG Degradation Platform

1개의 Degrader로 범용적으로 쓰자!!
내 타겟을 변형하여 범용적으로 사용 가능한 하나의 Degrader!



Cat #	Products	Description
6970	aTAG 2139	Degrader of MTH1 fusion proteins for use / alinker and the cereblon-binding ligand Thalidomide
6971	aTAG 4531	
6605	dTAG-13	Degrades mutant FKBP12^{F36V} fusion proteins / a linker and a cereblon-binding ligand. Degrader of FKBP12F36V with expression of FKBP12F36V in-frame with a protein of interest Plasmid vectors for the lentiviral expression and CRISPR-mediated knock-in of FKBP12F36V are a avilable from Addgene
6912	dTAG-7	

	Dose tuneability	Efficacy	Reversibility	Kinetics	Selectivity
TAG Degradation Platform (dTAG/aTAG)	***	****	****	***	****
Gene knockout e.g. CRISPR/Cas9	*	****	*	*	****
Gene knockdown e.g. RNAi	*	***	*	*	**