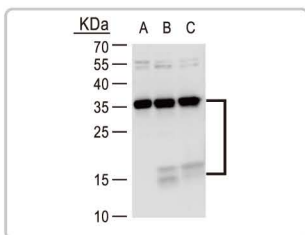
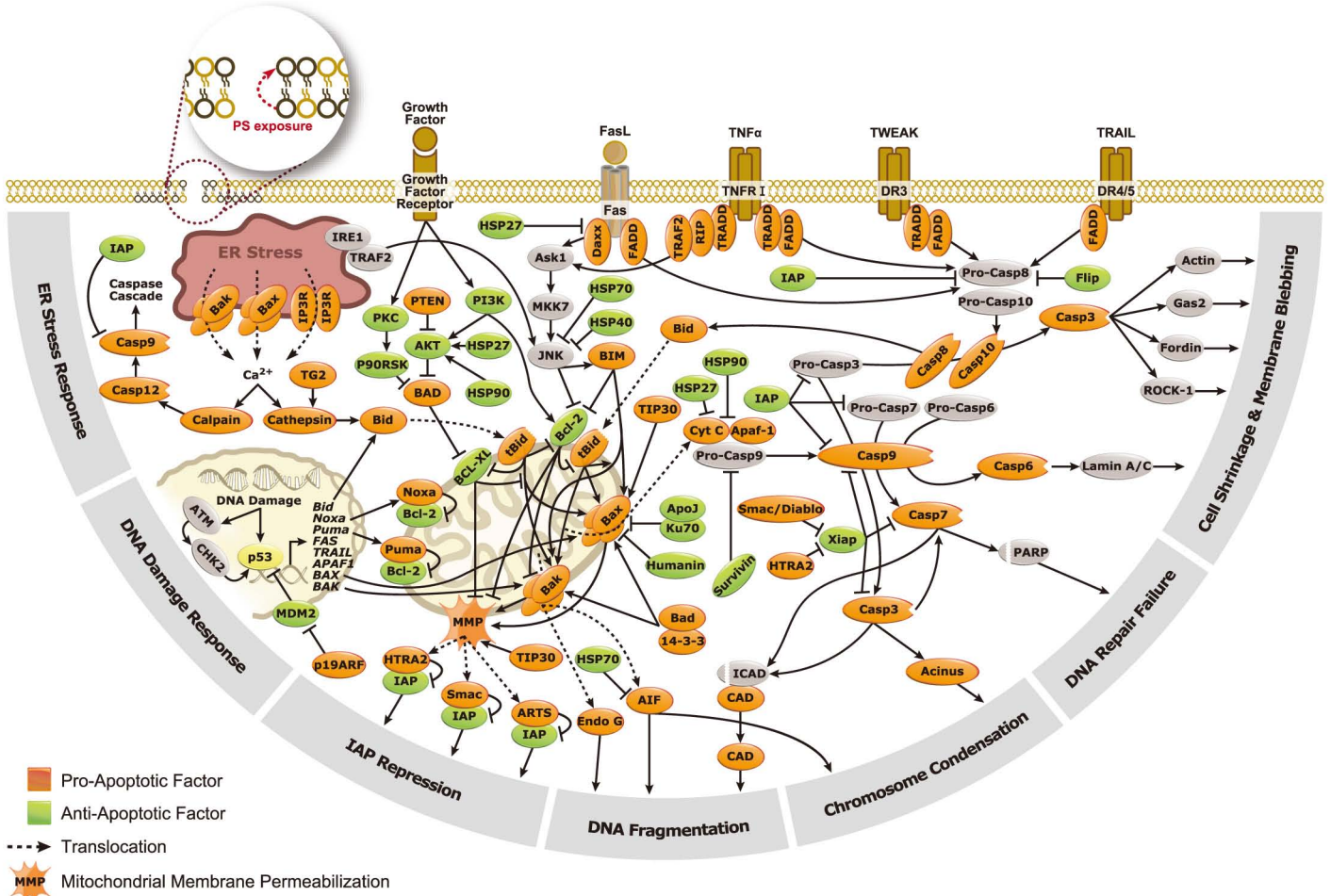
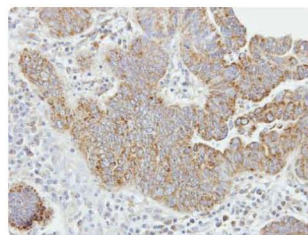




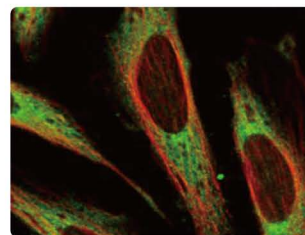
# Apoptosis



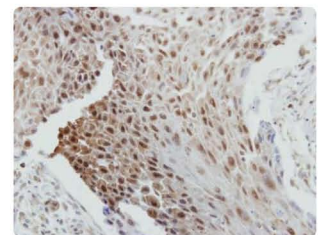
**Caspase 3 antibody (GTX110543)**  
WB analysis on HeLa whole cell lysate. (A) untreated. (B) 24hr cisplatin treatment. (C) 48hr cisplatin treatment.



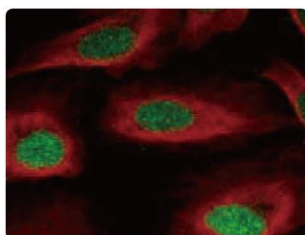
**Caspase 8 antibody [N1C1] (GTX100905)**  
IHC analysis on paraffin-embedded gastric carcinoma.



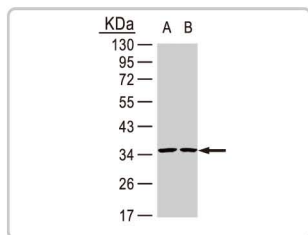
**FADD antibody (GTX116064)**  
ICC analysis on HeLa cells.



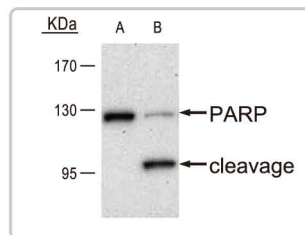
**BCL2 antibody (GTX100064)**  
IHC analysis on paraffin-embedded breast carcinoma.



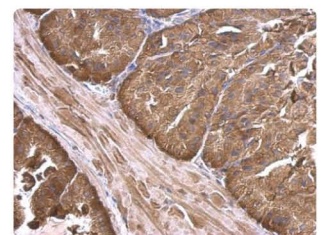
**Survivin antibody (GTX100441)**  
ICC analysis on U2OS cells.



**Annexin V antibody (GTX113384)**  
WB analysis on whole cell lysate. (A) HeLa. (B) HepG2.



**PARP1 antibody (GTX100573)**  
WB analysis on HCT116 whole cell lysate. (A) untreated. (B) cisplatin treatment.



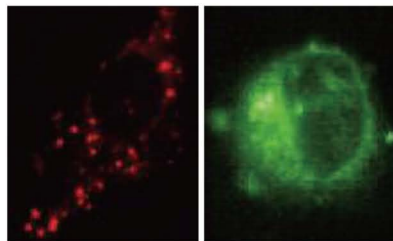
**Calpain 2 antibody (GTX102499)**  
IHC analysis on paraffin-embedded mouse prostate.

## Representative Publications

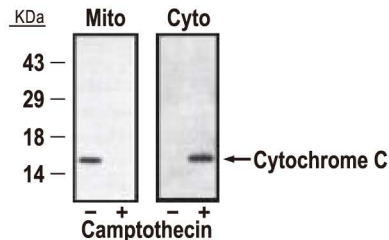
Cat. No.	Product name	Publication	Cat. No.	Product name	Publication
GTX105661	Bcl-X antibody	<i>Cell</i> 2010. 142(4): 625-36	GTX22324	Caspase 9 active antibody	<i>Leukemia</i> 2013. 27(5): 1019-27
GTX100644	Fas Ligand antibody [N2C1], Internal	<i>Cell Host Microbe</i> 2014. 15(4): 424-34	GTX22302	Caspase 3 (Active) antibody	<i>Brain</i> 2011. 134(Pt 5): 1344-61
GTX22323	Caspase 7 active antibody	<i>Leukemia</i> 2013. 27(5): 1019-27	GTX42820	Fas antibody [IPO-4]	<i>Hepatology</i> 2007. 45(3): 755-66

## Apoptosis Detection Kits

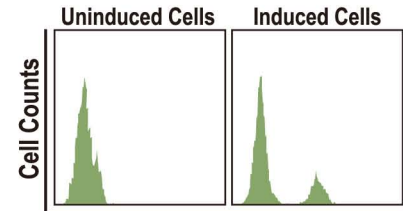
Product	Cat. No.	Features
MitoLume Mitochondrial Apoptosis Detection Kit	GTX85581	<ul style="list-style-type: none"> <li>★ Live-cell imaging allows for real-time observation.</li> <li>★ Simple: detects the apoptotic process based on intracellular re-localization and spectrum shift of fluorescent signals.</li> <li>★ Fast: only takes 30min.</li> </ul>
Cytochrome c Release Assay Kit	GTX85531	<ul style="list-style-type: none"> <li>★ Quantitative assay by Western Blot.</li> <li>★ Simple: No ultracentrifugation is required.</li> <li>★ Fast: only takes 3 hours.</li> </ul>
easyTUNEL DNA Fragmentation Assay Kit	GTX85582	<ul style="list-style-type: none"> <li>★ Conveniently detecting DNA fragmentation.</li> <li>★ Simple: One-step labelling of apoptotic cells.</li> <li>★ Fast: takes less than 1 hour.</li> </ul>
proTUNEL DNA Fragmentation Assay Kit	GTX85585	<ul style="list-style-type: none"> <li>★ Optimized for Flow cytometry.</li> <li>★ Sensitive: Utilize Br-dUTP, which incorporates into DNA strand more readily than any other reagents.</li> <li>★ Fast: only takes 1 hours.</li> </ul>
Annexin V Apoptosis Kit	GTX85587 (Biotin) GTX85588 (EGFP) GTX85591 (FITC) GTX85590 (Cy3) GTX85586 (PE) GTX85589 (Cy5)	<ul style="list-style-type: none"> <li>★ Apoptosis assay with Annexin V-conjugates.</li> <li>★ Simple: one-step staining procedure.</li> <li>★ Fast: takes only 10 min.</li> <li>★ Detection can be analyzed by flow cytometry or by fluorescence microscopy.</li> </ul>



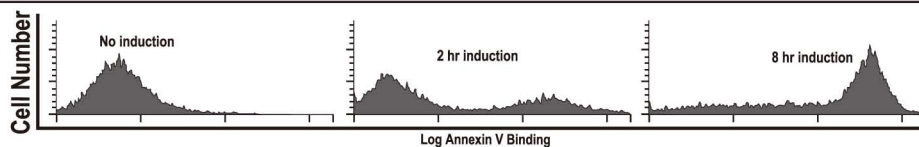
**Health Cells**      **Apoptotic cell**  
**MitoLume Mitochondrial Apoptosis Detection Kit (GTX85581):**  
 Detection of apoptosis is achieved by utilizing a cationic fluorescent dye, MitoLume, that fluoresces differently in healthy versus apoptotic cells.



**Cytochrome c Release Assay Kit (GTX85531):**  
 Cytochrome c Was Released from Mitochondria into Cytosol in Apoptotic Cells. Mitochondria and cytosol fractions were isolated at 6 hours following induction of apoptosis with camptothecin and probed with cytochrome c antibody according to the kit instructions.



**proTUNEL DNA Fragmentation Assay Kit (GTX85585):**  
 Detection of Apoptotic Cells Using proTUNEL Kit by Flow Cytometry. Control cells (uninduced) and apoptosis-induced cells were both collected, labeled with proTUNEL according to the kit instructions. Results were analyzed by flow cytometry.



**Annexin V-EGFP Apoptosis Detection Kit (GTX85588):**  
 Detection of apoptosis in Jurkat cells that were treated with the apoptosis inducer camptothecin (GTX47937) for various times as indicated. Results were analyzed by flow cytometry.

## Apoptosis Antibodies

Cat. No.	Product name	Host & Clonality	Reactivity	Application
GTX100289	14-3-3 sigma antibody	Rb pAb	Hu, Ms, Rat	ICC/IF, IHC-P, WB
GTX113298	14-3-3 gamma antibody	Rb pAb	Hu, Ms	ICC/IF, IHC-P, WB
GTX101075	14-3-3 zeta antibody	Rb pAb	Hu, Ms	ICC/IF, IHC-P, WB
GTX100031	ABR antibody [C3], C-term	Rb pAb	Hu, Ms	ICC/IF, WB
GTX101236	ApoJ antibody	Rb pAb	Hu, Ms, Rat	IHC-P, WB
GTX27354	Acinus antibody	Rb pAb	Hu, Ms	IHC-P, WB
GTX113306	AIF antibody [N1C1]	Rb pAb	Hu, Ms	ICC/IF, IHC-P, WB
GTX102399	AIF antibody [N1N2], N-term	Rb pAb	Hu	ICC/IF, IHC-P, WB
GTX113329	Annexin A1 antibody	Rb pAb	Hu, Ms	ICC/IF, IHC-P, WB
GTX103250	Annexin V antibody	Rb pAb	Hu, Ms, Rat	ICC/IF, WB
GTX113384	Annexin V antibody [N2C3]	Rb pAb	Hu, Ms	WB
GTX22000	APAF1 antibody	Rb pAb	Hu, Ms, Rat	IHC-P, WB
GTX15178	APAF1 antibody (ready-to-use)	Rb pAb	Hu, Ms, Rat	IHC, IHC-P
GTX107199	ART5 antibody [N1C3]	Rb pAb	Hu	IHC-P, WB
GTX107921	ASK1 antibody [C2C3-2], C-term	Rb pAb	Hu, Ms	IHC-P, WB
GTX50417	BAD antibody	Rb pAb	Hu, Ms, Rat	IHC, IHC-P, WB
GTX59560	Bad (phospho Ser112) antibody	Rb pAb	Hu, Ms, Rat	IHC, IP, WB
GTX38680	Bad (phospho Ser136) antibody	Rb pAb	Hu, Ms, Rat	IHC-P, WB
GTX23191	Bax antibody [5B7]	Ms mAb	Ms	ICC/IF, WB
GTX61026	Bax antibody [E63]	Rb mAb	Hu, Ms, Rat	IHC-M, IHC-P, IP, WB
GTX109683	BAX antibody [N1N2], N-term	Rb pAb	Hu, Rat	ICC/IF, IP, WB
GTX61005	BCL2 antibody [E17]	Rb mAb	Hu, Rat	FACS, ICC/IF, IHC-P, IP, WB

## Apoptosis Antibodies

	Cat. No.	Product name	Host & Clonality	Reactivity	Application
	GTX628904	BCL2 antibody [GT576]	Ms mAb	Hu	WB
Citation	GTX100064	BCL2 antibody [N1N2], N-term	Rb pAb	Hu, Rat	IHC-P, WB
Citation	GTX105661	Bcl-X antibody	Rb pAb	Hu, Ms, Rat	ICC/IF, IHC-P, WB
Citation	GTX46035	Bcl-X antibody [7B2.5] (PE)	Ms mAb	Hu, Ms	FACS, IP, WB
Citation	GTX84834	Bcl-XL antibody [4A9]	Ms mAb	Hu	ICC/IF, WB
	GTX124266	Bcl-XS antibody	Rb pAb	Hu	IHC-P, WB
Citation	GTX110568	Bid antibody [N1C3-2]	Rb pAb	Hu	ICC/IF, IHC-P, WB
	GTX104636	Bif1 antibody [C2C3], C-term	Rb pAb	Hu, Ms	ICC/IF, IHC-P, WB
	GTX50597	BIM antibody	Rb pAb	Hu, Ms, Rat	IHC, IHC-P, WB
	GTX50308	BIM (phospho Ser69) antibody	Rb pAb	Hu, Ms, Rat	ICC/IF, IHC-P
	GTX111630	Caspase 1 antibody	Rb pAb	Hu	ICC/IF, IHC-P, WB
	GTX101322	Caspase 1 antibody [N1N3]	Rb pAb	Hu	ICC/IF, IHC-P, WB
	GTX123675	Caspase 1 p10 subunit antibody	Rb pAb	Hu	IHC-P, WB
	GTX110542	Caspase 2 antibody	Rb pAb	Hu	WB
	GTX82535	Caspase 2 antibody, Internal	Rb pAb	Hu	ELISA, FACS, IHC, IHC-P, WB
	GTX86956	Caspase 2 (cleaved Gly170) antibody	Rb pAb	Hu	ELISA, WB
	GTX86954	Caspase 2 (cleaved Thr325) antibody	Rb pAb	Hu, Ms, Rat	ELISA, WB
Citation	GTX22302	Caspase 3 (Active) antibody	Rb pAb	Hu, Ms, Rat, Frt	IHC-Fr, IHC-P, WB
	GTX86952	Caspase 3 (cleaved Asp175) antibody	Rb pAb	Hu, Ms, Rat	ELISA, IHC-P, WB
Citation	GTX110543	Caspase 3 antibody	Rb pAb	Hu, Ms	ICC/IF, IHC-P, WB
Citation	GTX73090	Caspase 3 antibody	Rb pAb	Hu, Ms, Rat, Rb	IHC, IHC-P, IP, WB
	GTX114013	Caspase 4 antibody [N1C1]	Rb pAb	Hu	WB
	GTX86890	Caspase 4 (cleaved Gln81) antibody	Rb pAb	Hu	ELISA, WB
	GTX113639	Caspase 4 antibody	Rb pAb	Hu	IHC-P, WB
	GTX100204	Caspase 4 antibody [N2N3]	Rb pAb	Hu	ICC/IF, IHC-P, WB
	GTX61385	Caspase 5 antibody [EP876Y], N-term	Rb mAb	Hu	ICC/IF, IHC-P, IP, WB
	GTX59707	Caspase-5 antibody	Rb pAb	Hu, Ms, Mk, Rat, Hm, Bov	WB
	GTX86923	CASP5 (cleaved Asp121) antibody	Rb pAb	Hu	ELISA, WB
	GTX86899	CASP5 (cleaved Ser331) antibody	Rb pAb	Hu	ELISA, WB
	GTX61526	Caspase 6 (pro) antibody [EP1325Y]	Rb mAb	Hu, Ms, Rat	FACS, ICC/IF, IHC-P, IP, WB
	GTX59708	Caspase-6 P antibody	Rb pAb	Hu, Ms, Rat	WB
	GTX59553	Caspase 6 (Active) antibody	Rb pAb	Hu, Ms, Rat	WB
	GTX59554	Caspase 7 (Active) antibody	Rb pAb	Hu, Ms, Rat	IHC, IP, WB
Citation	GTX22323	Caspase 7 active antibody	Rb pAb	Hu, Ms, Rat	FACS, ICC/IF, IHC-Fr, IP, WB
	GTX102337	Caspase 7 antibody [N1C3]	Rb pAb	Hu	WB
	GTX123679	Caspase 7 p11 subunit antibody	Rb pAb	Hu	IHC-P, WB
Citation	GTX110723	Caspase 8 antibody	Rb pAb	Hu	IHC-P, WB
	GTX100905	Caspase 8 antibody [N1C1]	Rb pAb	Hu	ICC/IF, IHC-P, WB
	GTX59607	Caspase-8 (Active) antibody	Rb pAb	Ms, Rat	WB
	GTX86945	Caspase 9 (cleaved Asp315) antibody	Rb pAb	Hu	ELISA, IHC, IHC-P, WB
	GTX86928	Caspase 9 (cleaved Asp330) antibody	Rb pAb	Hu	ELISA, IHC, IHC-P, WB
	GTX86912	Caspase 9 (cleaved Asp353) antibody	Rb pAb	Ms, Rat	ELISA, IHC, IHC-P, WB
Citation	GTX112888	Caspase 9 antibody [N2C3]	Rb pAb	Hu, Rat	WB
Citation	GTX22324	Caspase 9 active antibody	Rb pAb	Hu	ICC/IF, IP, WB
	GTX59704	Caspase-10 antibody	Rb pAb	Hu, Ms, Rat	WB
	GTX113148	Caspase 10 antibody	Rb pAb	Hu	ICC/IF, IHC-P, WB
	GTX10454	Caspase 11 antibody [17D9]	Rat mAb	Ms, Rat	IHC-Fr, IP, WB
	GTX59705	Caspase-11 antibody	Rb pAb	Ms, Rat	WB
	GTX74429	Caspase 12 antibody, N-term	Rb pAb	Hu, Ms, Rat	IHC, IHC-P, WB
	GTX59923	Caspase-12 antibody	Rb pAb	Ms, Rat	WB
Citation	GTX102350	Calpain 1 antibody	Rb pAb	Hu	FACS, ICC/IF, IHC-P, WB
	GTX102340	Calpain 1 antibody [N3C2], Internal	Rb pAb	Hu, Ms	ICC/IF, IHC-P, WB
Citation	GTX102499	Calpain 2 antibody [N2C1], Internal	Rb pAb	Hu, Ms	FACS, ICC/IF, IHC, WB
	GTX112668	Cathepsin A antibody	Rb pAb	Hu	IHC-P, WB
	GTX103095	Cathepsin F antibody [N3C3]	Rb pAb	Hu	WB
	GTX105671	Cathepsin O antibody [N1C3]	Rb pAb	Hu	ICC/IF, IHC-P, WB
	GTX114350	Cathepsin S antibody	Rb pAb	Hu	ICC/IF, IHC-P, WB
	GTX108585	Cytochrome C antibody	Rb pAb	Hu, Ms, Rat	IHC-P, WB
	GTX59718	Cytochrome c antibody	Rb pAb	Hu, Ms, Chk, Dog, Rat, Bov	IP, WB
Citation	GTX13575	Cytochrome C antibody [7H8.2C12]	Ms mAb	Hu, Ms, Dm, Pig, Rat, Hm, Hrs, Pgn	WB
	GTX63057	Cleaved Lamin A/C (Asp230) antibody [EPR4520]	Rb mAb	Hu, Ms, Rat	IP, WB
	GTX110087	clAP1 antibody	Rb pAb	Hu, Ms, Rat	WB
	GTX629402	clAP1 antibody [GT422]	Ms mAb	Hu	WB
	GTX113128	clAP2 antibody [C1C3]	Rb pAb	Hu	IHC-P, WB
	GTX83312	DAXX antibody [7A11]	Ms mAb	Hu	ELISA, FACS, ICC/IF, WB
	GTX61041	Daxx antibody [E94]	Rb mAb	Hu	FACS, ICC/IF, IHC-P, WB
	GTX112908	DAXX antibody [N1N3]	Rb pAb	Hu	ICC/IF, IHC-P, WB

## Apoptosis Antibodies

Cat. No.	Product name	Host & Clonality	Reactivity	Application
GTX113864	DAP3 antibody [N1C2-2]	Rb pAb	Hu	ICC/IF, IHC-P, WB
GTX86959	DFF45 (cleaved Asp224) antibody	Rb pAb	Hu	ELISA, IHC, IHC-P
GTX62526	DFF45/DFF35 antibody [EPR4220]	Rb mAb	Hu	FACS, ICC/IF, IHC-P, IP, WB
Citation GTX23930	Diablo antibody	Rb pAb	Hu, Ms, Rat	IHC-P, WB
GTX30249	Diablo antibody [78-1-118]	Ms mAb	Hu, Ms, Rat	WB
GTX114385	Endo G antibody [N1C3]	Rb pAb	Hu, Ms	WB
GTX84986	EndoG antibody [7F2D7]	Ms mAb	Hu, Ms, Rat	ELISA, WB
GTX10522	Endonuclease G antibody	Rb pAb	Hu, Ms, Rat	IHC-P, WB
GTX62984	FADD (mouse) antibody [EPR5030], C-term	Rb mAb	Ms	FACS, IHC-P, WB
GTX116064	FADD antibody [N3C2], Internal	Rb pAb	Hu	ICC/IF, IHC-P, WB
GTX16104	FAS antibody [H11]	Rat mAb	Hu, Ms, Dog, Cat	FACS, ICC/IF, WB
GTX16105	FAS antibody [H11] (FITC)	Rat mAb	Hu, Ms, Dog, Cat	FACS, ICC/IF
Citation GTX42820	Fas antibody [IPO-4]	Ms mAb	Hu, Rat	ELISA, FACS, IP
Citation GTX100644	Fas Ligand antibody [N2C1], Internal	Rb pAb	Hu	WB-Ag
Citation GTX101145	HSP27 antibody	Rb pAb	Hu, Ms, Rat	FACS, ICC/IF, IHC-P, IP, WB
GTX112964	HSP27 antibody	Rb pAb	Hu	ICC/IF, IHC-P, IP, WB
GTX102049	HSP40 antibody [N1C1]	Rb pAb	Hu	WB
Citation GTX111088	HSP70 1A antibody	Rb pAb	Hu, Ms	ICC/IF, IHC-P, IP, WB
GTX106148	HSP70 1B antibody	Rb pAb	Hu	ICC/IF, IHC-P, WB
Citation GTX109753	Hsp90 alpha antibody	Rb pAb	Hu, Rat	ICC/IF, IHC-P, IP, WB
GTX101448	HSP90 beta antibody	Rb pAb	Hu, Ms, Rat	ICC/IF, IHC-P, WB
GTX110703	HTRA2 antibody	Rb pAb	Hu	IHC-P, WB
GTX37250	HTRA2 antibody	Ms mAb	Hu	ELISA, WB
GTX62115	HTRA2 antibody [EPR22]	Rb mAb	Hu, Ms, Rat	FACS, ICC/IF, IHC-P, IP, WB
Citation GTX113416	ICAD antibody [N2C3]	Rb pAb	Hu	WB
GTX100259	IRE1 alpha antibody [C3], C-term	Rb pAb	Hu	IHC-P, WB
GTX113682	IRE1 alpha antibody [N1N2], N-term	Rb pAb	Hu	WB
Citation GTX63722	IRE1 (phospho Ser724) antibody [EPR5253]	Rb mAb	Hu	WB
Citation GTX101165	JNK1 antibody	Rb pAb	Hu, Ms	ICC/IF, WB
GTX50868	JNK1/JNK2/JNK3 (phospho Thr183/Tyr185) antibody	Rb pAb	Hu, Ms, Rat	ICC/IF, WB
GTX86913	Lamin A (cleaved Asp230) antibody	Rb pAb	Hu, Ms, Rat	ELISA, IHC, IHC-P, WB
GTX101126	Lamin A/C antibody	Rb pAb	Hu, Ms	ICC/IF, IHC, IHC-P, WB
Citation GTX101127	Lamin A/C antibody	Rb pAb	Hu, Ms, Rat	ICC/IF, IHC-P, WB
Citation GTX111677	Lamin A/C antibody	Rb pAb	Hu, Ms	IHC-P, WB
GTX109173	LITAF antibody [N1C3]	Rb pAb	Hu	IHC-P, IP, WB, ChIP-seq
Citation GTX100653	MDM2 antibody	Rb pAb	Hu	ICC/IF, IHC-P
GTX61546	MKK7 antibody [EP1455Y], C-term	Rb mAb	Hu, Ms, Rat	FACS, ICC/IF, IHC-P, IP, WB
GTX85521	Noxa antibody	Rb pAb	Hu, Ms, Rat	ELISA, ICC/IF, IHC, WB
Citation GTX20080	P19ARF antibody	Rb pAb	Hu, Ms	ELISA, ICC/IF, IHC-P, IP, WB, ChIP assay
Citation GTX102965	P53 antibody	Rb pAb	Hu	ICC/IF, IHC-P, IP, WB, ChIP assay
Citation GTX70220	p84 antibody [5E10]	Ms mAb	Hu, Ms, Rat, Mk	ICC/IF, IHC, IP, WB, ChIP assay
GTX70220-01	p84 antibody [5E10] (HRP)	Ms mAb	Hu	WB
GTX86921	PARP (cleaved Asp214) antibody	Rb pAb	Hu, Ms	ELISA, WB
Citation GTX100573	PARP1 antibody	Rb pAb	Hu	ICC/IF, WB, ChIP assay
GTX628836	PARP1 antibody [GT6212]	Ms mAb	Hu	WB
GTX112864	PARP1 antibody [N2C1], Internal	Rb pAb	Hu	ICC/IF, IHC-P, WB, ChIP assay
Citation GTX29643	PUMA antibody	Rb pAb	Hu, Ms	ICC/IF, WB
GTX109675	PUMA antibody [C2C3], C-term	Rb pAb	Hu	IHC-P, IP, WB
GTX61282	PUMA antibody [EP512Y], C-term	Rb mAb	Hu	FACS, ICC/IF, IHC-P, IP, WB
GTX59604	ROCK1 (cleaved antibody [12M03])	Ms mAb	Hu, Ms	WB
GTX113266	ROCK1 antibody [N1N2], N-term	Rb pAb	Hu, Ms, Rat	ICC/IF, IHC-P, IP, WB
GTX106746	Smac antibody [N1C3]	Rb pAb	Hu	IHC-P, WB
GTX113108	Smac antibody [N1C3-3]	Rb pAb	Hu	IHC-P, WB
Citation GTX100052	Survivin antibody	Rb pAb	Hu	ICC/IF, IHC-P, WB
GTX100441	Survivin antibody	Rb pAb	Hu, Ms	ICC/IF, IHC-P, WB
GTX62734	TRADD antibody [EPR3604]	Rb mAb	Hu, Ms, Rat	ICC/IF, IHC-P, IP, WB
GTX104695	TRADD antibody [N1], N-term	Rb pAb	Hu	ICC/IF, IHC-P, WB
GTX111138	TRAF2 antibody	Rb pAb	Hu	ICC/IF, IHC-P, WB
GTX113043	TRAIL antibody	Rb pAb	Hu	WB
GTX12124	TRAIL antibody [55B709.3]	Ms mAb	Hu	IHC, WB
GTX100608	TID1 antibody	Rb pAb	Hu	ICC/IF, IHC-P, WB
GTX100119	TIP30 antibody	Rb pAb	Hu	ICC/IF, IHC-P, IP, WB
GTX111702	Transglutaminase 2 antibody [N3C3]	Rb pAb	Hu	ICC/IF, IHC-P, WB
GTX62953	TWEAK Receptor / Fn14 antibody [EPR3179]	Rb mAb	Hu, Ms, Rat	IHC-P, IP, WB
GTX100496	XIAP antibody [C1C3]	Rb pAb	Hu, Ms	ICC/IF, IHC-P, WB
GTX113130	XIAP antibody [N1C1]	Rb pAb	Hu	ICC/IF, IHC-P, WB
GTX111202	XIAP antibody	Rb pAb	Hu, Ms	ICC/IF, IHC-P, WB