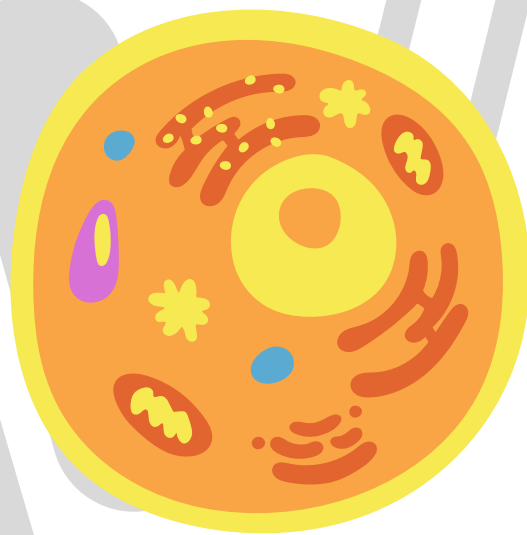


Apoptosis
细胞凋亡



咨询热线

0571-87000691

一抗·二抗·内参&标签·重组蛋白



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细胞凋亡

细胞凋亡（apoptosis）指为维持内环境稳定，由基因控制的细胞自主的有序的死亡。细胞凋亡与细胞坏死不同，细胞凋亡是一个主动的过程，它涉及一系列基因的激活、表达以及调控等的作用，它并不是病理条件下，自体损伤的一种现象，而是为更好地适应生存环境而主动争取的一种死亡过程。

细胞凋亡是细胞的一种基本生物学现象，在多细胞生物去除不需要的或异常的细胞中起着必要的作用。它在生物体的进化、内环境的稳定以及多个系统的发育中起着重要的作用。细胞凋亡不仅是一种特殊的细胞死亡类型，而且具有重要的生物学意义及复杂的分子生物学机制。

细胞凋亡的过程大致分为一下几个阶段

接受凋亡信号 → 凋亡调控分子间相互作用 → 蛋白水解酶的活化 → 进入连续反应的过程

Caspase家族

Caspase凋亡蛋白酶是含半胱氨酸的天门冬氨酸特异蛋白酶，它是一类对底物天门冬氨酸部位有特异水解作用、活性中心含半胱氨酸的蛋白酶，其在天冬氨酸残基的C-末端侧切割其靶点。半胱天冬酶通常使细胞存活途径失活，并且特异性地活化其他促进细胞凋亡的因子。Caspase凋亡蛋白酶家族分为三类：1）第一类：凋亡启动作用；2）第二类：凋亡效应作用；3）第三类：炎性caspase酶

对于细胞凋亡通路，我们主要关注以上的第一类和第二类Caspase蛋白。Caspase分子以酶原的形式被合成，并且在体内低水平组成性表达。外部或内部的刺激引起Caspase分子以级联（cascade）的活化方式活化。从以上分类我们看出Caspase酶在细胞凋亡过程中，一类是信号启动者（或者传递信号），另外一类则行使凋亡执行的作用。所以这个家族的蛋白在细胞凋亡过程中起着核心的作用。

靶标	产品货号	产品名称	反应种属	应用
死亡受体 相关	db6064	Fas (4C3) Mouse mAb	Human	WB
	db12190	Fas Recombinant Rabbit mAb	Human	WB, IHC, ICC/IF, FC
	db7798	Fas Rabbit pAb	Human	WB,IHC,ICC/IF,FC
	db8788	TNF Receptor I Rabbit pAb	Human	WB,FC
	db6178	TNFRSF10B (7F4) Mouse mAb	Human, Mouse	WB,ICC/IF
	db6180	TNFRSF10B (6F6) Mouse mAb	Human	WB
	db12888	DR5 Recombinant Rabbit mAb	Human	WB,IHC,IP
	db14494	DR5 Recombinant Rabbit mAb	Human	WB,ICC/IF,FC,IP
	db8437	DR5 Rabbit pAb	Human	WB,ICC/IF,FC,IP
	db7259	DR5 Rabbit pAb	Human	WB,IHC,IP
	db5543	Phospho-FADD (Ser194) Rabbit pAb	Human	WB,IP
	db13926	Phospho-FADD (Ser194) Recombinant Rabbit mAb	Human	WB,IP
	db11195	FADD Recombinant Rabbit mAb	Human	WB, IHC, ICC/IF, FC, IP
	db11505	FADD Recombinant Rabbit mAb	Mouse, Rat	WB, IHC, FC
	db77	FADD Rabbit pAb	Mouse	WB,IHC,FC
	db1997	FADD Rabbit pAb	Human	WB,IHC,ICC/IF,FC,IP
	db6467	PARP1 (10C2) Mouse mAb	Human, Mouse, Rat	WB,IHC-P
	db12530	PARP1 Recombinant Rabbit mAb	Human	WB
	db15686	PARP1 Recombinant Rabbit mAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC
	db11121	PARP1 Recombinant Rabbit mAb	Human, Mouse, Rat	WB,IHC,ICC/IF
	db1841	PARP1 Rabbit pAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC
	db3085	PARP1 Rabbit pAb	Human, Mouse, Rat	WB,IHC,ICC/IF
	db1970	PARP1 Rabbit pAb	Human	WB
	db6230	Lamin A/C Mouse mAb	Human, Mouse, Rat	WB
	db6351	Lamin A/C (5D12) Mouse mAb	Human, Mouse, Rat	WB,ICC/IF
	db11008	Lamin A/C Recombinant Rabbit mAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC
	db13193	Lamin A/C Recombinant Rabbit mAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC,IP
	db5914	Lamin A/C Rabbit pAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC,IP
	db20155	Lamin A/C Rabbit pAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC
	db14902	ICAD Recombinant Rabbit mAb	Human	WB,IP
	db13280	ICAD Recombinant Rabbit mAb	Human	WB,IHC,ICC/IF,FC,IP
	db13371	ICAD Recombinant Rabbit mAb	Human, Mouse, Rat	WB
	db2535	ICAD Rabbit pAb	Human, Mouse, Rat	WB
	db22943	ICAD Rabbit pAb	Human	WB,IP
	db21899	ICAD Rabbit pAb	Human	WB,IHC,ICC/IF,FC,IP
	db11120	ROCK1 Recombinant Rabbit mAb	Human, Mouse, Rat	WB, IHC, ICC/IF, FC, IP
	db13063	ROCK1 Recombinant Rabbit mAb	Human, Mouse, Rat	WB,IHC,ICC/IF,IP
	db4228	ROCK1 Rabbit pAb	Human, Mouse, Rat	WB,IHC,ICC/IF,IP
	db1651	ROCK1 Rabbit pAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC,IP
	db11967	ROCK2 Recombinant Rabbit mAb	Human, Mouse, Rat	WB, ICC/IF
	db562	ROCK2 Rabbit pAb	Human, Mouse, Rat	WB,ICC/IF

靶标	产品货号	产品名称	反应种属	应用
Caspase 凋亡启动子	db15691	Caspase-2 Recombinant Rabbit mAb	Human	WB
	db13352	Caspase-2 Recombinant Rabbit mAb	Human	WB
	db13358	Caspase-2 Recombinant Rabbit mAb	Human, Mouse, Rat	WB
	db11291	Caspase-2 Recombinant Rabbit mAb	Human, Mouse, Rat	WB, IHC, ICC/IF, FC
	db1826	Caspase-2 Rabbit pAb	Human	WB
	db21696	Caspase-2 Rabbit pAb	Human, Mouse, Rat	WB
	db21794	Caspase-2 Rabbit pAb	Human	WB
	db24344	Caspase-2 Rabbit pAb	Human, Mouse, Rat	WB, IHC, ICC/IF, FC
	db6486	Caspase-8 (4C2) Mouse mAb	Human, Mouse, Rat	WB,ICC/IF,IHC-P
	db12451	Caspase-8 Recombinant Rabbit mAb	Human, Mouse, Rat	WB,IHC
	db15744	Caspase-8 Recombinant Rabbit mAb	Human	WB
	db11621	Caspase-8 Recombinant Rabbit mAb	Human	WB
	db1571	Caspase-8 Rabbit pAb	Human	WB
	db201	Caspase-8 Rabbit pAb	Human, Mouse, Rat	WB,IHC
	db1791	Caspase-8 Rabbit pAb	Human	WB
	db16098	Caspase-9 Recombinant Rabbit mAb	Human	WB, IHC, ICC/IF, FC, IP
	db6217	Caspase-9 (1D1) Mouse mAb	Human	WB
	db11292	Caspase-9 Recombinant Rabbit mAb	Human, Mouse	WB, IP
	db12902	Caspase-9 Recombinant Rabbit mAb	Human	WB,IHC,FC
	db12919	Caspase-9 Recombinant Rabbit mAb	Mouse, Rat	WB,IP
	db14222	Caspase-9 Recombinant Rabbit mAb	Human, Mouse	WB,IHC,ICC/IF,IP
	db2119	Caspase-9 Rabbit pAb	Human, Mouse	WB,IHC,ICC/IF,IP
	db21445	Caspase-9 Rabbit pAb	Mouse, Rat	WB,IP
	db21959	Caspase-9 Rabbit pAb	Human	WB,IHC,FC
	db23715	Caspase-9 Rabbit pAb	Human, Mouse	WB, IP
	db12792	Caspase-10 Recombinant Rabbit mAb	Human	WB,IHC,FC,IP
	db2957	Caspase-10 Rabbit pAb	Human	WB,IHC,FC,IP
Caspase 凋亡效应器	db9853	Caspase-3 Rabbit pAb	Mouse	WB
	db2059	Caspase-3 Rabbit pAb	Human	WB,IHC,ICC/IF,FC,IP
	db3108	Caspase-3 Rabbit pAb	Human,Mouse, Rat	WB,IHC,IP
	db14868	Caspase-3 Recombinant Rabbit mAb	Mouse	WB
	db12058	Caspase-3 Recombinant Rabbit mAb	Human	WB,IHC,ICC/IF,FC,IP
	db13235	Caspase-3 Recombinant Rabbit mAb	Human,Mouse, Rat	WB,IHC,IP
	db13640	Caspase-6 Recombinant Rabbit mAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC,IP
	db13728	Caspase-6 Recombinant Rabbit mAb	Human, Mouse, Rat	WB,IHC,ICC/IF,IP
	db15588	Caspase-6 Recombinant Rabbit mAb	Human, Mouse, Rat	WB,FC,IP
	db12533	Caspase-6 Recombinant Rabbit mAb	Human, Mouse	WB,IHC,ICC/IF,FC
	db12873	Caspase-6 Recombinant Rabbit mAb	Human, Mouse, Rat	WB,IHC

靶标	产品货号	产品名称	反应种属	应用
Caspase 凋亡效应器	db117	Caspase-6 Rabbit pAb	Human, Mouse, Rat	WB,IHC
	db2300	Caspase-6 Rabbit pAb	Human, Mouse, Rat	WB,FC,IP
	db20827	Caspase-6 Rabbit pAb	Human, Mouse	WB,IHC,ICC/IF,FC
	db20452	Caspase-6 Rabbit pAb	Human, Mouse, Rat	WB,IHC,ICC/IF,IP
	db20708	Caspase-6 Rabbit pAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC,IP
	db13106	Caspase-7 Recombinant Rabbit mAb	Human, Mouse, Rat	WB,IHC,FC
	db14082	Caspase-7 Recombinant Rabbit mAb	Human	WB,IHC,ICC/IF
	db14326	Caspase-7 Recombinant Rabbit mAb	Mouse, Rat	WB,ICC/IF,IP
	db687	Caspase-7 Rabbit pAb	Mouse, Rat	WB,ICC/IF,IP
	db22277	Caspase-7 Rabbit pAb	Human	WB,IHC,ICC/IF
	db9717	Caspase-7 Rabbit pAb	Human, Mouse, Rat	WB,IHC,FC
Caspase 其他蛋白	db11405	Caspase-1 Recombinant Rabbit mAb	Human, Mouse, Rat	WB, IP
	db12385	Caspase-1 Recombinant Rabbit mAb	Human	WB,IP
	db5308	Caspase-1 Rabbit pAb	Human	WB,IP
	db3022	Caspase-1 Rabbit pAb	Human, Mouse, Rat	WB, IP
线粒体相关	db12404	Caspase-11 Recombinant Rabbit mAb	Mouse	WB
	db14701	Caspase-11 Recombinant Rabbit mAb	Mouse	WB,IP
	db2124	Caspase-11 Rabbit pAb	Mouse	WB,IP
	db9931	Caspase-11 Rabbit pAb	Mouse	WB
	db12144	Cytochrome C Recombinant Rabbit mAb	Human, Mouse, Rat	WB, IHC, ICC/IF, IP
	db6489	Cytochrome C (7C10) Mouse mAb	Human, Mouse, Rat, Chicken	WB,ICC/IF,IHC-P
	db11926	Cytochrome C Recombinant Rabbit mAb	Human, Mouse, Rat	WB, IHC, ICC/IF, IP
	db2293	Cytochrome C Rabbit pAb	Human, Mouse, Rat	WB,IHC,ICC/IF,IP
	db2621	Cytochrome C Rabbit pAb	Human, Mouse, Rat	WB,IHC,ICC/IF,IP
	db14482	APAF1 Recombinant Rabbit mAb	Human, Mouse, Rat	WB,IP
	db8521	APAF1 Rabbit pAb	Human, Mouse, Rat	WB,IP
	db6267	AIF (8H1) Mouse mAb	Human	WB,ICC/IF
	db15482	AIF Recombinant Rabbit mAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC,IP
	db2772	AIF Rabbit pAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC,IP
	db13569	Endo G Recombinant Rabbit mAb	Human, Mouse, Rat	WB
	db21018	Endo G Rabbit pAb	Human, Mouse, Rat	WB
	db11787	XIAP Recombinant Rabbit mAb	Human, Mouse, Rat	WB
	db5527	XIAP Rabbit pAb	Human, Mouse, Rat	WB
	db11117	SMAC Recombinant Rabbit mAb	Human, Mouse, Rat	WB, IHC, ICC/IF, FC, IP
	db1637	Smac/Diablo Rabbit pAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC,IP
	db492	ATF-4 Rabbit pAb	Human	WB,IHC,ICC/IF,FC,IP
	db15953	ATF-4 Recombinant Rabbit mAb	Human	WB,IHC,ICC/IF,FC,IP

靶标	产品货号	产品名称	反应种属	应用
应激DNA损伤相关	db11608	DDIT3 Recombinant Rabbit mAb	Human, Mouse, Rat	WB, IHC
	db6566	DDIT3 (7G7) Mouse mAb	Human, Rat, Mouse	WB,IHC-P,ICC/IF
	db3131	DDIT3 Rabbit pAb	Human, Mouse, Rat	WB,IHC
	db15448	Calpain 1 Recombinant Rabbit mAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC
	db2934	Calpain 1 Rabbit pAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC
	db6223	JNK1 (1A4) Mouse mAb	Human, Mouse, Rat	WB,ICC/IF
	db3253	Phospho-JNK1/JNK2/JNK3 (Thr183/Thr183/Thr221) Rabbit pAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC,IP
	db20141	Phospho-JNK1 (Thr183/Tyr185) Rabbit pAb	Human	WB,IP
	db20565	Phospho-JNK1/JNK2/JNK3 (Tyr185/Tyr185/Tyr223) Rabbit pAb	Human, Mouse, Rat	WB,IP
	db12699	Phospho-JNK1/JNK2/JNK3 (Tyr185/Tyr185/Tyr223) Recombinant Rabbit mAb	Human, Mouse, Rat	WB,IP
	db13979	Phospho-JNK1/JNK2/JNK3 (Thr183/Thr183/Thr221) Recombinant Rabbit mAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC,IP
	db11220	Phospho-JNK1 (Thr183/Tyr185) Recombinant Rabbit mAb	Human	WB,IP
	db12544	JNK1 Recombinant Rabbit mAb	Human, Mouse, Rat	WB
	db12713	JNK1/JNK2/JNK3 Recombinant Rabbit mAb	Human, Mouse, Rat	WB,ICC/IF,FC,IP
	db13511	JNK1 Recombinant Rabbit mAb	Human, Mouse, Rat	WB
	db14225	JNK1/JNK2/JNK3 Recombinant Rabbit mAb	Human, Mouse, Rat	WB,ICC/IF,FC,IP
	db58	JNK1 Rabbit pAb	Human, Mouse, Rat	WB
	db2618	JNK1/JNK2/JNK3 Rabbit pAb	Human, Mouse, Rat	WB,ICC/IF,FC,IP
	db3352	JNK1/JNK2/JNK3 Rabbit pAb	Human, Mouse, Rat	WB,ICC/IF,FC,IP
	db8572	JNK1 Rabbit pAb	Human, Mouse, Rat	WB
	db13968	JNK2 Recombinant Rabbit mAb	Human, Mouse, Rat	WB,IHC,FC,IP
	db3780	JNK2 Rabbit pAb	Human, Mouse, Rat	WB,IHC,FC,IP
	db13032	JNK3 Recombinant Rabbit mAb	Human, Mouse, Rat	WB,ICC/IF,FC
	db22741	JNK3 Rabbit pAb	Human, Mouse, Rat	WB,ICC/IF,FC
	db9894	p53 Rabbit pAb	Mouse	WB,ICC/IF,FC,IP
	db9370	p53 Rabbit pAb	Human,Mouse	WB,ICC/IF, FC, IP
	db488	p53 Rabbit pAb	Human	WB,ICC/IF
	db3246	p53 Rabbit pAb	Human	WB,IHC,ICC/IF
	db14679	p53 Recombinant Rabbit mAb	Mouse	WB,ICC/IF,FC,IP
	db12023	p53 Recombinant Rabbit mAb	Human	WB,ICC/IF

Bcl-2家族

Bcl-2，也称为B细胞淋巴瘤2，Bcl家族是调节细胞凋亡的重要蛋白家族，其既有促凋亡蛋白(BH3-Only, BH 1-3等)也有抑凋亡蛋白(Bcl-2, Bcl-w等)家族的这两类蛋白在细胞凋亡过程中相互协调，通过介导线粒体途径的信号通路共同决定细胞是否进入凋亡程序，线粒体凋亡的第一个调节步骤由Bcl-2家族蛋白介导。Bcl-2家族分为三类：(1)抑凋亡蛋白，Bcl2、Bcl-xL、Mcl-1；(2)促凋亡蛋白，含有BH1/2/3结构域，包括Bax和Bak；(3)促凋亡蛋白，也称为凋亡引发亚族(apoptosis initiator group)，由仅含BH3结构域的蛋白质组成，包括Bad、Bid、Bim、Puma和Noxa。因为BH3结构域的存在，此类蛋白可以与前两类Bcl2家族的蛋白互作，从而起到促凋亡的作用。

靶标	产品货号	产品名称	反应种属	应用
Bcl-2	db12049	Bcl-2 Recombinant Rabbit mAb	Human	WB,IHC,ICC/IF,FC,IP
	db11929	Bcl-2 Recombinant Rabbit mAb	Human, Mouse	WB, IHC, ICC/IF, FC
	db176	Bcl-2 Rabbit pAb	Human	WB,IHC,ICC/IF,FC,IP
	db2374	Bcl-2 Rabbit pAb	Human, Mouse	WB,IHC,ICC/IF,FC
	db16019	Bcl-XL Recombinant Rabbit mAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC,IP
	db14392	Bcl-XL Recombinant Rabbit mAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC,IP
	db225	Bcl-XL Rabbit pAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC,IP
	db20843	Bcl-XL Rabbit pAb	Human, Mouse, Rat	WB,IHC,IP
	db11616	MCL1 Recombinant Rabbit mAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC,IP
	db2797	MCL1 Rabbit pAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC,IP
	db21725	Phospho-Bad (Ser112) Rabbit pAb	Human, Mouse, Rat	WB,IP
	db12648	Phospho-Bad (Ser112) Recombinant Rabbit mAb	Human, Mouse, Rat	WB,IP
	db11004	Bad Recombinant Rabbit mAb	Human, Mouse, Rat	WB, IHC, ICC/IF, FC, IP
	db915	Bad Rabbit pAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC,IP
	db11087	Bak Recombinant Rabbit mAb	Human	WB, IHC, ICC/IF, FC, IP
	db1242	Bak Rabbit pAb	Human	WB,IHC,ICC/IF,FC,IP
	db15214	Bok Recombinant Rabbit mAb	Human, Rat	WB,IP
	db12752	Bok Recombinant Rabbit mAb	Human, Mouse, Rat	WB,FC
	db3766	Bok Rabbit pAb	Human, Rat	WB,IP
	db4336	Bok Rabbit pAb	Human, Mouse, Rat	WB,FC
	db6393	Bid (3C5) Mouse mAb	Human	WB,ICC/IF,FC
	db11490	Bid Recombinant Rabbit mAb	Human	WB, IHC, ICC/IF, FC, IP
	db21820	Bid Rabbit pAb	Human	WB,IHC,ICC/IF,FC,IP
	db13581	Bim Recombinant Rabbit mAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC,IP

靶标	产品货号	产品名称	反应种属	应用
Bcl-2	db836	Bim Rabbit pAb	Human, Mouse, Rat	WB,IHC,ICC/IF,FC,IP
	db15651	NOXA2/p67phox Recombinant Rabbit mAb	Human, Mouse, Rat	WB,IHC,ICC/IF,IP
	db2021	NOXA2/p67phox Rabbit pAb	Human, Mouse, Rat	WB,IHC,ICC/IF,IP
	db11258	Noxa Recombinant Rabbit mAb	Human	WB
	db7684	Noxa Rabbit pAb	Human	WB
	db12341	PUMA Recombinant Rabbit mAb	Human	WB,IHC,ICC/IF,FC
	db3761	PUMA Rabbit pAb	Human	WB,IHC,ICC/IF,FC
其他凋亡抑制相关	db5728	AKT1/2/3 Rabbit pAb	Human, Mouse,Rat	WB,IHC,ICC/IF,FC,IP
	db14851	Phospho-AKT1 (Ser473) Recombinant Rabbit mAb	Human, Mouse, Rat	WB,IHC,ICC/IF
	db6621	ERK1/2 (9A4) Mouse mAb	Human, Rat, Mouse	WB,IHC-P
	db6570	ERK1/2 (1B4) Mouse mAb	Human, Rat, Mouse	WB,IHC-P
	db6298	ERK1/2 (4F3) Mouse mAb	Human, Mouse, Rat	WB
	db6122	ERK1/2 (4A4) Mouse mAb	Human, Mouse, Rat	WB
	db11649	ERK1/2 Recombinant Rabbit mAb	Human, Mouse, Rat	WB,ICC/IF,FC,IP
	db758	ERK1/2 Rabbit pAb	Human, Mouse, Rat	WB,ICC/IF,FC,IP
	db8358	NF-kB p65 Rabbit pAb	Human	WB,ICC/IF,FC
	db3141	NF-kB p65 Rabbit pAb	Human, Mouse	WB,IHC,ICC/IF,FC,IP
	db6456	NF-kB p65 (3D2) Mouse mAb	Human, Mouse, Rat	WB,IHC-F,IHC-P,ICC/IF,IP
	db6428	NF-kB p65 (5A10) Mouse mAb	Human, Mouse, Rat	WB,IHC-P,IP
	db13524	NF-kB p65 Recombinant Rabbit mAb	Human	WB,ICC/IF,FC
	db11612	NF-KB p65 Recombinant Rabbit mAb	Human, Mouse	WB, IHC, ICC/IF, IP
	db7996	Phospho-NF-kB p65 (Ser536) Rabbit pAb	Human, Mouse, Rat	WB,IP
	db3028	Phospho-NF-kB p65 (Ser276) Rabbit pAb	Human	WB,ICC/IF,IP
	db12441	Phospho-NF-kB p65 (Ser536) Recombinant Rabbit mAb	Human, Mouse, Rat	WB, IP
	db13992	Phospho-NF-kB p65 (Ser276) Recombinant Rabbit mAb	Human	WB,ICC/IF,IP