

**Anti – Ca<sup>2+</sup>/Calmodulin-Dependent Protein Kinase II  $\delta$  1-  $\delta$  4**

Camk2d, CAMK1; Camk2; Camki; RATCAMKI; MGC124639

Cat No.	Size	Conjugation	Price	Application	Note
KY041	200 $\mu$ g/200 $\mu$ l	—	¥49,000	IH, WB	

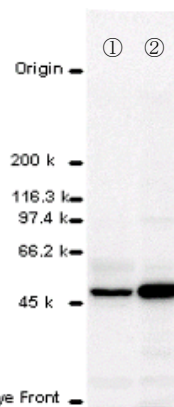
<b>Host</b>	: Rabbit	<b>Specificity</b>	: Rat
<b>Isotype</b>	: —	<b>Clonality</b>	: Polyclonal Antibody
<b>Immunogen</b>	: Partial peptide of rat Ca <sup>2+</sup> /Calmodulin-Dependent Protein Kinase II $\delta$ 1- $\delta$ 4(N terminal)		
<b>Purity</b>	: Antigen Affinity Purified	<b>Cross Reactivity</b>	: Not tested

Ca<sup>2+</sup>/calmodulin-dependent protein kinase II (CaM kinase II) may play key roles in various Ca<sup>2+</sup>-induced cellular functions. Interestingly, many kinds of isoforms have been identified in various tissues or cells. Recently, it has been revealed that some isoforms are located in specific regions in the cells, so it is speculated that these isoforms have physiologically particular functions in each region. There are four different isoforms such as  $\alpha$ ,  $\beta$ ,  $\gamma$  and  $\delta$ . This antibody reacts with  $\delta$  1-  $\delta$  4 splice variants. Immunochemical studies indicate that  $\delta$  2 is expressed in various tissues or cells such as insulinoma cells and that  $\delta$  3 is abundant in the nucleus in cerebellar granule cells. These results suggest that  $\delta$  3 is involved in Ca<sup>2+</sup>-dependent gene expression.

This antibody has been proved to be useful for the immunoblotting and immunohistochemistry.

Preparation of antibodies and instruction

Hideyuki Yamamoto. Department of Pharmacology and Neuropsychiatry, Faculty of Medicine, Kumamoto University, Japan



Sample:

- ① MIN6 (control)
- ② MIN6 (after overexpression of  $\delta$  2)

**Anti – Aldehyde Oxidase**

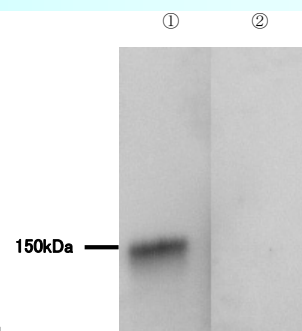
Aox1

Cat No.	Size	Conjugation	Price	Application	Note
KR063	25 $\mu$ g/100 $\mu$ l	—	¥49,000	WB	

<b>Host</b>	: Rabbit	<b>Specificity</b>	: Rat
<b>Isotype</b>	: —	<b>Clonality</b>	: Polyclonal Antibody
<b>Immunogen</b>	: Rat Aldehyde Oxidase purified from rat liver		
<b>Purity</b>	: Antigen Affinity Purified	<b>Cross Reactivity</b>	: Not tested

Preparation of antibodies and instruction :

Tanaka Y, Masubuchi A. Dept. of Pharmaceutics I. Tohoku Pharmaceutical University



Sample :

- ① Aldehyde Oxidase purified from Rat liver (0.04  $\mu$ g)
- ② Xanthine Oxidase (0.1  $\mu$ g)

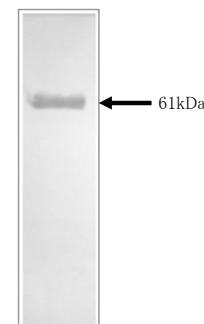
**Anti – Adenosine Deaminase2**

Cat No.	Size	Conjugation	Price	Application	Note
KR081	25 $\mu$ g/100 $\mu$ l	—	¥49,000	WB	

<b>Host</b>	: Rabbit	<b>Specificity</b>	: Chicken
<b>Isotype</b>	: —	<b>Clonality</b>	: Polyclonal Antibody
<b>Immunogen</b>	: Partial peptide of chicken Adenosine Deaminase2		
<b>Purity</b>	: Antigen Affinity Purified	<b>Cross Reactivity</b>	: Not tested

Preparation of antibodies and instruction :

Watanabe Y., Egawa S. Hokkaido Pharmaceutical University School of Pharmacy



Sample : Chicken liver ADA2

**Anti – Indoleamin-pyrrole 2,3 dioxygenase (IDO)**

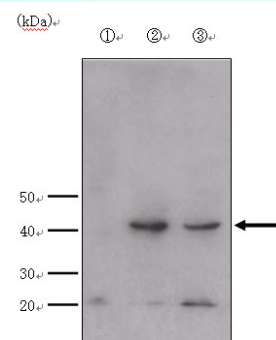
Indo, Ido

Cat No.	Size	Conjugation	Price	Application	Note
KR101	150 $\mu$ g/300 $\mu$ l	—	¥49,000	WB	

<b>Host</b>	: Rabbit	<b>Specificity</b>	: Mouse
<b>Isotype</b>	: —	<b>Clonality</b>	: Polyclonal Antibody
<b>Immunogen</b>	: Partial peptide of mouse Indoleamine-2,3 dioxygenase (C terminal)		
<b>Purity</b>	: Antigen Affinity Purified	<b>Cross Reactivity</b>	: Not tested

Preparation of antibodies and instruction :

Dr. Minatogawa Y. at Department of Biochemistry, Kawasaki Medical School



Sample : CMT-93 mouse rectum-derived cell lysate

- ① Additive nothing
- ② Interferon-gamma (+)
- ③ Interferon-gamma (+), dbcAMP(+)

## Anti – Oazin (Antizyme inhibitor)

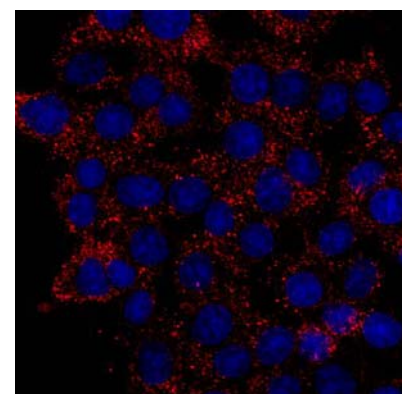
Azin1, Oazi; Oazin

Cat No.	Size	Conjugation	Price	Application	Note
KO140	50 $\mu$ g/200 $\mu$ l	—	¥55,000	IC, WB	

<b>Host</b>	: Mouse	<b>Specificity</b>	: Rat
<b>Isotype</b>	: IgG3, $\kappa$	<b>Clonality</b>	: Monoclonal Antibody (HI-12)
<b>Immunogen</b>	: Human cancer cell line		
<b>Purity</b>	: ProteinG Affinity Purified	<b>Cross Reactivity</b>	: Not tested

ODC (ornithine decarboxylase) is a key enzyme in polyamine biosynthesis pathway. The degradation of ODC catalyzed by the 26S proteasome is accelerated by antizyme, an ODC inhibitory protein induced poliamine. Antizyme inhibitor 1 (AZI) specifically binds to antizyme with a higher affinity than that of ODC and thus can release active ODC from inactive ODC-antizyme complex. AZI consists of about 450 amino acids and 50 kDa protein. AZI is highly homologous to ODC but retains no enzymatic activity. AZI is a short-living protein that undergoes proteasomal degradation and the degradation is inhibited by interaction with antizyme.

AZI is induced in cells and tissues following growth stimulation, is elevated in some tumors. AZI overexpression leads to increased rates of cell proliferation in the rat carcinoma cells and mouse fibroblasts and this effect appears to be partially independent of the ability of AZI to interact with antizyme. It has been also reported that antizyme and AZI localize to centrosome and may play an important role in the regulation of centrosome homeostasis and oncogenesis.



ICC of antizyme inhibitor. Cell: HTC cells.  
1st antibody: KO140  
2nd antibody: anti-mIgG Alexa-conjugated 546 (red).  
The nuclei were stained with TO-PRO3 (blue).  
(Data from Dr. Y. Murakami)

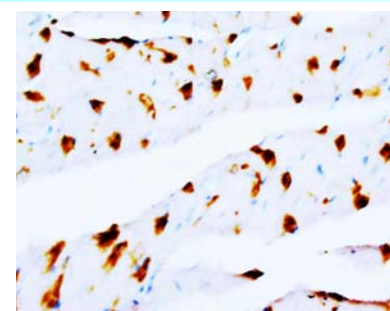
## Anti – dUTPase

dUTPase; FLJ20622; DUT; deoxyuridine triphosphatase

Cat No.	Size	Conjugation	Price	Application	Note
KW171	100 $\mu$ g	—	¥51,000	IH, WB	

<b>Host</b>	: Rabbit	<b>Specificity</b>	: Human
<b>Isotype</b>	: —	<b>Clonality</b>	: Polyclonal Antibody
<b>Immunogen</b>	: Partial peptide of human dUTPase (Middle region)		
<b>Purity</b>	: Antigen Affinity Purified	<b>Cross Reactivity</b>	: Mouse, rat, rabbit

Deoxyuridine triphosphate nucleotidohydrolase (dUTPase) is responsible for maintaining low intracellular levels of dUTP, thus preventing the incorporation of dUTP into DNA. dUTPase activity/expression can be down-regulated using siRNA specifically targeted to dUTPase mRNA and dUTPase plays a role in DNA nucleotide metabolism. This protein, present predominantly in the cytoplasm, contains 252 amino acids with a Mr of 26,704. It exhibits 35% identity with the E. coli dUTPase and 53% identity with the Saccharomyces cerevisiae enzyme. The nuclear and mitochondrial forms of dUTPase are encoded by the same gene with isoform-specific transcripts arising through the use of alternative 5-prime exons. Human dUTPase exhibits 92% identity with rat. Moreover, this enzyme has profound effects on the efficacy of agents that target thymidylate biosynthesis.



Rat cardiac muscle tissue using dUTPase antibody  
Staining dUTPase in cytoplasm  
DAB chromogenic Cross Reactivity

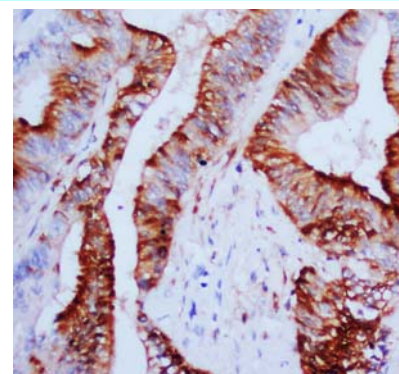
## Anti – MAPK1/3 (ERK1, ERK2)

ERK2, MAPK2; ERK1, MAPK3

Cat No.	Size	Conjugation	Price	Application	Note
KW190	100 $\mu$ g	—	¥55,000	IH, WB	

<b>Host</b>	: Rabbit	<b>Specificity</b>	: Human
<b>Isotype</b>	: —	<b>Clonality</b>	: Polyclonal Antibody
<b>Immunogen</b>	: Partial peptide of human MAPK1+3 (N terminal)		
<b>Purity</b>	: Antigen Affinity Purified	<b>Cross Reactivity</b>	: Mouse, rat, rabbit

MAPK1(ERK2) shares high homology with MAPK3(ERK1). MAP kinase phosphatase as a locus of flexibility in a mitogen-activated protein kinase signaling network. Mitogen-activated protein (MAP) kinases [also known as Erks] have been established to function as important mediators of signal transduction by growth factor receptors. ERK1/ERK2-dependent activation of endogenous ribosomal transcription, while inactivation of ERK1/ERK2 causes an equally immediate reversion to the basal transcription level. ERK1/ERK2 was found to phosphorylate the architectural transcription factor UBF at amino acids 117 and 201 within HMG boxes 1 and 2, preventing their interaction with DNA. Mutation of these sites inhibited transcription activation and abrogated the transcriptional response to ERK1/ERK2.



Human intestinal cancer using MAPK1-3 antibody  
Staining MAPK1-3 in cytoplasm and nucleus  
DAB chromogenic Cross Reactivity

## Anti – Myeloperoxidase

MPO; myeloperoxidase

Cat No.	Size	Conjugation	Price	Application	Note
KW195	100 $\mu$ g	—	¥55,000	IC, IH, WB	

<b>Host</b>	: Rabbit	<b>Specificity</b>	: Human
<b>Isotype</b>	: —	<b>Clonality</b>	: Polyclonal Antibody
<b>Immunogen</b>	: Partial peptide of human MPO (C terminal)		
<b>Purity</b>	: Antigen Affinity Purified	<b>Cross Reactivity</b>	: Mouse, rat, rabbit

Myeloperoxidase (MPO) is a mammalian phagocyte hemoprotein thought to primarily mediate host defense reactions. It is abundantly expressed in neutrophils and secreted during their activation. Myeloperoxidase is part of the host defense system of human polymorphonuclear leukocytes, responsible for microbicidal activity against a wide range of organisms. It is located in the nucleus as well as in the cytoplasm. Intranuclear MPO may help to protect DNA against damage resulting from oxygen radicals produced during myeloid cell maturation and function.

**Anti – PP2A** RP11-247A12.4, PP2A, PR53, PTPA; PPP2R4; protein phosphatase 2A activator, regulatory subunit 4

Cat No.	Size	Conjugation	Price	Application	Note
KW209	100 $\mu$ g	—	¥51,000	IC, IH, WB	

<b>Host</b>	: Rabbit	<b>Specificity</b>	: Human
<b>Isotype</b>	: —	<b>Clonality</b>	: Polyclonal Antibody
<b>Immunogen</b>	: Partial peptide of human PP2A (N terminal)		
<b>Purity</b>	: Antigen Affinity Purified	<b>Cross Reactivity</b>	: Mouse, rat, rabbit

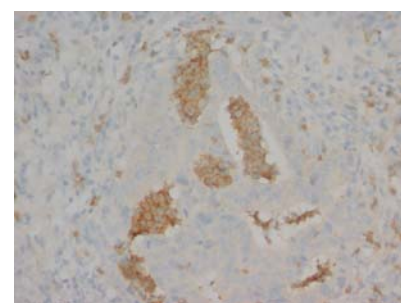
The catalytic subunit of human protein phosphatase 2A (PPP2CA) encodes a 309-amino acid polypeptide. It is localized to chromosome 5. The gene (approximately 30 kbp) is composed of seven exons and six introns. It is predicted to be important for phosphatase enzymatic activity. Methylation of the C-terminal leucine residue (Leu309) of protein serine/threonine phosphatase 2A catalytic subunit (PP2AC) is known to regulate catalytic activity in vitro. Furthermore, PP2A has a fundamental role in cardiac function, and suggests that disturbances in protein phosphatase expression and activity may cause or exacerbate the course of cardiac diseases.

**Anti – Caspase-2** Caspase-2; CASP-2, ICH-1L, ICH-1L/1S, ICH1, NEDD2; CASP2; apoptosis-related cysteine peptidase

Cat No.	Size	Conjugation	Price	Application	Note
KW232	100 $\mu$ g	—	¥51,000	IH, WB	

<b>Host</b>	: Rabbit	<b>Specificity</b>	: Human
<b>Isotype</b>	: —	<b>Clonality</b>	: Polyclonal Antibody
<b>Immunogen</b>	: Partial peptide of human Caspase 2 (C terminal)		
<b>Purity</b>	: Antigen Affinity Purified	<b>Cross Reactivity</b>	: Rat

Caspase-2, which is involved in stress-induced apoptosis, is recruited into a large protein complex, the molecular composition of which remains elusive. activation of caspase-2 occurs in a complex that contains the death domain-containing protein PIDD, whose expression is induced by p53, and the adaptor protein RAIDD. Increased PIDD expression resulted in spontaneous activation of caspase-2 and sensitization to apoptosis by genotoxic stimuli. Caspase-2 acts both as a positive and negative cell death effector, depending upon cell lineage and stage of development..



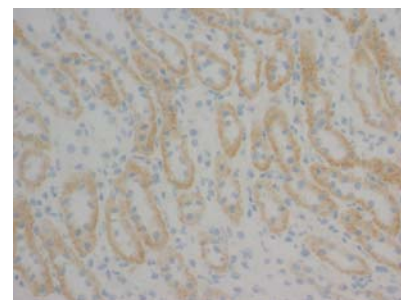
Rat intestinal cancer using Caspase-2 antibody

**Anti – MMP14** MMP-X1, MT1-MMP, MTMMP1; MMP14; matrix metalloproteinase 14

Cat No.	Size	Conjugation	Price	Application	Note
KW234	100 $\mu$ g	—	¥51,000	IH, WB	

<b>Host</b>	: Rabbit	<b>Specificity</b>	: Human
<b>Isotype</b>	: —	<b>Clonality</b>	: Polyclonal Antibody
<b>Immunogen</b>	: Partial peptide of human MMP14 (C terminal)		
<b>Purity</b>	: Antigen Affinity Purified	<b>Cross Reactivity</b>	: Rat

Matrix metalloproteinases (MMPs) are Zn(2+)-binding endopeptidases that degrade various components of the extracellular matrix (ECM). The MMPs are enzymes implicated in normal and pathologic tissue remodeling processes, wound healing, angiogenesis, and tumor invasion. MMPs have different substrate specificities and are encoded by different genes. membrane-type matrix metalloproteinase (MMP14) may be an activator of pro-gelatinase A (MMP2) and is expressed in fibroblast cells during both wound healing and human cancer progression. Survivin, MMP2, MMP9, and MMP14 mRNA expression levels in clinically aggressive pigmented lesions were significantly higher than those in normal eutopic endometrium, and survivin gene expression in pigmented lesions was also higher than that in nonpigmented lesions (P less than 0.05). There was a close correlation between survivin and MMP2, MMP9, and MMP14 gene expression levels in 63 endometriotic tissues examined (P less than 0.01).



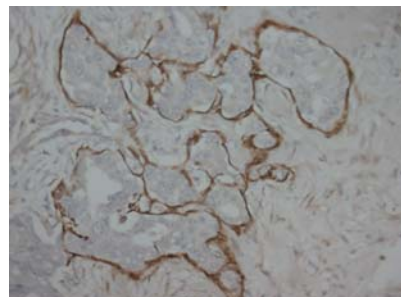
Rat kidney tissue using MMP14 antibody

**Anti – MMP2** CLG4, CLG4A, MONA, TBE-1; matrix metalloproteinase 2 (72kDa type IV collagenase)

Cat No.	Size	Conjugation	Price	Application	Note
KW241	100 $\mu$ g	—	¥51,000	IC, IH, WB	

<b>Host</b>	: Rabbit	<b>Specificity</b>	: Human
<b>Isotype</b>	: —	<b>Clonality</b>	: Polyclonal Antibody
<b>Immunogen</b>	: Partial peptide of human MMP2 (C terminal)		
<b>Purity</b>	: Antigen Affinity Purified	<b>Cross Reactivity</b>	: Rat

Matrix metalloproteinase-2 (MMP2) is a Type IV collagenase, 72-kD, which is also known as gelatinase and is a member of a group of secreted zinc metalloproteases. The MMP2 gene is 17 kb long with 13 exons varying in size from 110 to 901 bp and 12 introns ranging from 175 to 4,350 bp, located within a region of human chromosome 16q13. In addition, The extra exons encode the amino acids of the fibronectin-like domain which has so far been found in only the 72- and 92-kDa type IV collagenase. MMP2, which has a critical role in the binding of progelatinase A and TIMP4 via the C-terminal hemopexin-like domain (C domain), is functionally associated on the surface of angiogenic blood vessels. NOT only is a likely effector of endometrial menstrual breakdown, MMP2 is also effector and regulator of the inflammatory response. Moreover, MMP2 could be helpful in diagnosing Takayasu arteritis.



Human bladder carcinoma using MMP2 antibody

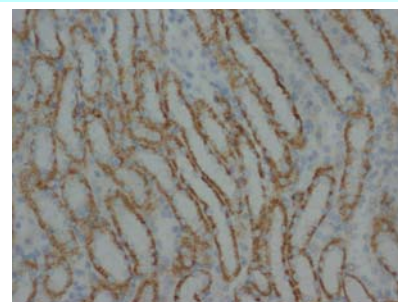
**Anti – MMP16**

C8orf57, MMP-X2, MT-MMP2, MT-MMP3, MT3-MMP; MMP16; matrix metalloproteinase 16

Cat No.	Size	Conjugation	Price	Application	Note
KW242	100 $\mu$ g	—	¥51,000	IH, WB	

<b>Host</b>	: Rabbit	<b>Specificity</b>	: Human
<b>Isotype</b>	: —	<b>Clonality</b>	: Polyclonal Antibody
<b>Immunogen</b>	: Partial peptide of human MMP16 (C terminal)		
<b>Purity</b>	: Antigen Affinity Purified	<b>Cross Reactivity</b>	: Rat

The matrix metalloproteinase 16(MMP16) protein consists of 604 amino acids and has a characteristic MMP domain structure, which gene is mapped on human chromosome 8q21. Additionally, MMP16 has a C-terminal extension containing a potential transmembrane domain, similar to MMP14, MMP15, and MMP17. Furthermore, it is membrane-bound and is a member of the membrane-type MMPs that are a subclass in the MMP family since the other members lack a C-terminal transmembrane domain and are secreted as soluble forms. MMP16 is expressed as a 12-kb transcript in brain, placenta, heart, and some carcinoma cell lines, but is not detectably expressed in lung, kidney, liver, spleen, and muscle.



Rat kidney using MMP16 antibody

**Anti – TOP-2A**

TOP2, TP2A; TOP2A; topoisomerase (DNA) II alpha 170kDa

Cat No.	Size	Conjugation	Price	Application	Note
KW246	100 $\mu$ g	—	¥51,000	WB	

<b>Host</b>	: Rabbit	<b>Specificity</b>	: Human
<b>Isotype</b>	: —	<b>Clonality</b>	: Polyclonal Antibody
<b>Immunogen</b>	: Partial peptide of human TOP-2A (C terminal)		
<b>Purity</b>	: Antigen Affinity Purified	<b>Cross Reactivity</b>	: Rat

The human topoisomerase II enzyme is encoded by a single-copy gene which is mapped to 17q21-q22. The TOP2A gene spans approximately 30 kb and contains 35 exons. Furthermore, DNA topoisomerases are enzymes that control and alter the topologic states of DNA in both prokaryotes and eukaryotes. Topoisomerase II from eukaryotic cells catalyzes the relaxation of supercoiled DNA molecules, catenation, decatenation, knotting, and unknotting of circular DNA. It appears likely that the reaction catalyzed by topoisomerase II involves the crossing-over of 2 DNA segments. There are about 100,000 molecules of topoisomerase II per HeLa cell nucleus, constituting about 0.1% of the nuclear extract. DNA topoisomerase II-alpha is associated with the pol II holoenzyme and is a required component of chromatin-dependent coactivation. Specific inhibitors of topoisomerase II blocked transcription on chromatin templates, but did not affect transcription on naked templates. Addition of purified topoisomerase II-alpha reconstituted chromatin-dependent activation activity in reactions with core pol II.

**Anti – Cathepsin D**

CPSD; CLN10; MGC2311; CTSD; cathepsin D

Cat No.	Size	Conjugation	Price	Application	Note
KW264	100 $\mu$ g	—	¥51,000	IH, WB	

<b>Host</b>	: Rabbit	<b>Specificity</b>	: Human
<b>Isotype</b>	: —	<b>Clonality</b>	: Monoclonal Antibody (CP-D13)
<b>Immunogen</b>	: Human liver cathepsin D		
<b>Purity</b>	: Goat anti-mIgG affinity chromatography		
<b>Cross Reactivity</b>	: —		

Cathepsin D is one of the lysosomal proteinases. It is ubiquitously expressed and is involved in proteolytic degradation, cell invasion, and apoptosis. Cathepsin D is mapped to chromosome 11. The amino acid sequence predicted from the cDNA sequence shows that human cathepsin D consists of 412 amino acids with 20 and 44 amino acids in a pre- and a prosegment, respectively.

**Anti – Cathepsin L**

MEP; CATL; CTSL; FLJ31037; CTSL1; cathepsin L1

Cat No.	Size	Conjugation	Price	Application	Note
KW265	100 $\mu$ g	—	¥51,000	IH, WB	

<b>Host</b>	: Mouse	<b>Specificity</b>	: Human
<b>Isotype</b>	: IgG1	<b>Clonality</b>	: Monoclonal Antibody (CP-L14)
<b>Immunogen</b>	: Procathepsin L isolated from the human lung cancer cell line EPLC 32M1.		
<b>Purity</b>	: Goat anti-mIgG affinity chromatography		
<b>Cross Reactivity</b>	: Mouse, rat		

Cathepsin L is a lysosomal cysteine proteinase with a major role in intracellular protein catabolism. It also shows the most potent collagenolytic and elastinolytic activity in vitro of any of the cathepsins. Cathepsin L has been implicated in pathologic processes including myofibril necrosis in myopathies and in myocardial ischemia, and in the renal tubular response to proteinuria. Human liver cathepsin L consists of a heavy chain of about 25 kD and a light chain of about 5 kD. The gene is mapped to 9q21-q22. Cathepsin L is required for endothelial progenitor cell-induced neovascularization.

## Anti – MAP kinase activated

Cat No.	Size	Conjugation	Price	Application	Note
KW306	100 $\mu$ g	—	¥51,000	WB	

**Host** : Mouse **Specificity** : Human  
**Isotype** : IgG1 **Clonality** : Monoclonal Antibody (IL-13)  
**Immunogen** : —  
**Purity** : Goat anti-mIgG affinity chromatography **Cross Reactivity** : Mouse, rat

In mammalian cells, a variety of extracellular stimuli generate intracellular signals that converge on a limited number of so-called mitogen-activated protein (MAP) kinase pathways. The central core of each MAP kinase (MAPK) pathway is a conserved cascade of 3 protein kinases: an activated MAPK kinase kinase (MAPKKK) phosphorylates and activates a specific MAPK kinase (MAPKK), which then activates a specific MAPK. Mek1/2 MAPK kinases are essential for mammalian development, homeostasis, and Raf-induced hyperplasia. Germline mutations in genes within the MAPK pathway cause cardio-facio-cutaneous syndrome.

## Anti – ODC

ODC; MGC103389; Odc1; ornithine decarboxylase, structural 1

Cat No.	Size	Conjugation	Price	Application	Note
KW324	100 $\mu$ g	—	¥51,000	IH, WB	

**Host** : Mouse **Specificity** : Human  
**Isotype** : IgG2b **Clonality** : Monoclonal Antibody (ODC-22)  
**Immunogen** : Recombinant mouse ornithine decarboxylase  
**Purity** : Goat anti-mIgG affinity chromatography **Cross Reactivity** : —

Ornithine decarboxylase (ODC), the first enzyme in polyamine synthesis, is a transcriptional target of MYC and a modifier of APC-dependent tumorigenesis. It is located to 2p25. There is considerable genetic homology between a region of mouse chromosome 12 and the distal short arm of human chromosome 2. Complete amino acid sequence of human ornithine decarboxylase deduced from complementary DNA.

Anti – PP1  $\alpha$ 

PP-1A; PPP1A; PPP1CA; protein phosphatase 1, catalytic subunit, alpha isoform

Cat No.	Size	Conjugation	Price	Application	Note
KW337	100 $\mu$ g	—	¥51,000	IC, WB	

**Host** : Mouse **Specificity** : Rabbit  
**Isotype** : IgG2b **Clonality** : Monoclonal Antibody (PP-1A)  
**Immunogen** : Recombinant rabbit protein phosphatase 1  $\alpha$  (PP1  $\alpha$ ) catalytic subunit  
**Purity** : Goat anti-mIgG affinity chromatography **Cross Reactivity** : Human, mouse, rat

Protein phosphatase 1 alpha (PP1A) is one of four major serine/threonine-specific protein phosphatases which have been identified in eukaryotic cells by enzymatic methods. Phosphorylation of serine and threonine residues in proteins is a crucial step in the regulation of many cellular functions ranging from hormonal regulation to cell division and even short-term memory. Protein phosphatase-1 determined the efficacy of learning and memory by limiting acquisition and favoring memory decline. PPP1A gene is mapped to 11q13. Protein phosphatase 1 is a molecular constraint on learning and memory.

## Anti – Tryptophan hydroxylase

TPRH; TRPH; TPH1; tryptophan hydroxylase 1; NTPH; TPH2; tryptophan hydroxylase 2

Cat No.	Size	Conjugation	Price	Application	Note
KW350	100 $\mu$ g	—	¥51,000	WB	

**Host** : Mouse **Specificity** : Rabbit  
**Isotype** : IgG3 **Clonality** : Monoclonal Antibody (Try-63)  
**Immunogen** : Recombinant rabbit tryptophan hydroxylase  
**Purity** : Goat anti-mIgG affinity chromatography **Cross Reactivity** : Human, rat

Tryptophan hydroxylase is the rate-limiting enzyme in the synthesis of serotonin (5-hydroxytryptamine, or 5HT). Tryptophan hydroxylase analyzes the bipterin-dependent monoxygenation of tryptophan to 5-hydroxytryptophan (5HT), which is subsequently decarboxylated to form the neurotransmitter serotonin. Human tryptophan hydroxylase (TPH) is mapped to chromosome 11p15.3-p14 by in situ hybridization.

## Anti – Tyrosine hydroxylase

The; Th; tyrosine hydroxylase

Cat No.	Size	Conjugation	Price	Application	Note
KW351	100 $\mu$ g	—	¥51,000	IH, WB	

**Host** : Mouse **Specificity** : Rat  
**Isotype** : IgG1 **Clonality** : Monoclonal Antibody (TH-100)  
**Immunogen** : Rat tyrosine hydroxylase  
**Purity** : Goat anti-mIgG affinity chromatography **Cross Reactivity** : Human, rabbit

Tyrosine hydroxylase is involved in the conversion of phenylalanine to dopamine. As the rate-limiting enzyme in the synthesis of catecholamines, tyrosine hydroxylase has a key role in the physiology of adrenergic neurons. Human TH gene contains 13 primary exons and spans approximately 8 kb. TH is in the 11p15.5 region

**Anti – COX2**

Cyclooxygenase-2, COX-2; PHS-2; PGG/HS; PGHS-2; hCox-2; GRIPGHS; PTGS2

Cat No.	Size	Conjugation	Price	Application	Note
KW424	100 $\mu$ g	—	¥51,000	IH, WB	

<b>Host</b>	: Rabbit	<b>Specificity</b>	: Human
<b>Isotype</b>	: —	<b>Clonality</b>	: Polyclonal Antibody
<b>Immunogen</b>	: Partial peptide of human COX2 ( N terminal )		
<b>Purity</b>	: Goat anti-mIgG affinity chromatography <b>Cross Reactivity</b> : Mouse, rabbit, rat		

Cyclooxygenase (Cox) is the key enzyme in conversion of arachidonic acid to PGs, and two isoforms, Cox-1 and Cox-2, have been identified. Cox-2 gene encodes an inducible prostaglandin synthase enzyme that is overexpressed in adenocarcinomas and other tumors. Deletion of the murine Cox-2 gene in Min mice reduced the incidence of intestinal tumors, suggesting that it is required for tumorigenesis. This gene is localized to sites associated with retinal blood vessels, and plays an important role in blood vessel formation in the retina. And the glucocorticoid receptor suppression of COX-2 is also crucial for curtailing lethal immune activation, and suggest new therapeutic approaches for regulation of T-cell-mediated inflammatory diseases.

**Anti - ATP1B3**

CD298; ATPB-3; FLJ29027; ATP1B3

Cat No.	Size	Conjugation	Price	Application	Note
KB465	50 $\mu$ g	-	¥32,000	WB	-

<b>Host:</b>	Mouse	<b>Specificity:</b>	Human
<b>Isotype:</b>	-	<b>Clonality:</b>	Polyclonal Antibody
<b>Immunogen:</b>	Full length of human ATP1B3		
<b>Purity:</b>	Protein A purified	<b>Cross Reactivity:-</b>	

**Anti - NEDD4L**

RSP5; NEDD4-2; FLJ33870; KIAA0439; hNedd4-2; NEDD4L

Cat No.	Size	Conjugation	Price	Application	Note
KB521	50 $\mu$ g	-	¥32,000	WB	-

<b>Host:</b>	Mouse	<b>Specificity:</b>	Human
<b>Isotype:</b>	-	<b>Clonality:</b>	Polyclonal Antibody
<b>Immunogen:</b>	Full length of human NEDD4L		
<b>Purity:</b>	Protein A purified	<b>Cross Reactivity:-</b>	

**Anti - NUDT9**

NUDT10; MGC3037; NUDT9

Cat No.	Size	Conjugation	Price	Application	Note
KB523	50 $\mu$ g	-	¥32,000	WB	-

<b>Host:</b>	Mouse	<b>Specificity:</b>	Human
<b>Isotype:</b>	-	<b>Clonality:</b>	Polyclonal Antibody
<b>Immunogen:</b>	Full length of human NUDT9		
<b>Purity:</b>	Protein A purified	<b>Cross Reactivity:-</b>	

**Anti - ATP2C1**

HHD; BCPM; PMR1; SPCA1; hSPCA1; ATP2C1A; KIAA1347; ATP2C1

Cat No.	Size	Conjugation	Price	Application	Note
KB542	50 $\mu$ g	-	¥32,000	WB,IF	-

<b>Host:</b>	Mouse	<b>Specificity:</b>	Human
<b>Isotype:</b>	-	<b>Clonality:</b>	Polyclonal Antibody
<b>Immunogen:</b>	Full length of human ATP2C1		
<b>Purity:</b>	Protein A purified	<b>Cross Reactivity:-</b>	

**Anti - DDX11**

CHL1; KRG2; CHLR1; MGC9335; MGC133249; DDX11

Cat No.	Size	Conjugation	Price	Application	Note
KB545	50 $\mu$ g	-	¥32,000	WB,IF	-

<b>Host:</b>	Mouse	<b>Specificity:</b>	Human
<b>Isotype:</b>	-	<b>Clonality:</b>	Polyclonal Antibody
<b>Immunogen:</b>	Full length of human DDX11		
<b>Purity:</b>	Protein A purified	<b>Cross Reactivity:-</b>	

**Anti - CYB5R3**

B5R; DIA1; CYB5R3

<b>Cat No.</b>	<b>Size</b>	<b>Conjugation</b>	<b>Price</b>	<b>Application</b>	<b>Note</b>
KB547	50 µg	-	¥32,000	WB,IF	-
<b>Host:</b> Mouse		<b>Specificity:</b> Human			
<b>Isotype:</b> -		<b>Clonality:</b> Polyclonal Antibody			
<b>Immunogen:</b> Full length of human CYB5R3					
<b>Purity:</b> Protein A purified		<b>Cross Reactivity:-</b>			

**Anti - EME1**

MMS4L; FLJ31364; EME1

<b>Cat No.</b>	<b>Size</b>	<b>Conjugation</b>	<b>Price</b>	<b>Application</b>	<b>Note</b>
KB559	50 µg	-	¥32,000	WB,IF	-
<b>Host:</b> Mouse		<b>Specificity:</b> Human			
<b>Isotype:</b> -		<b>Clonality:</b> Polyclonal Antibody			
<b>Immunogen:</b> Full length of human EME1					
<b>Purity:</b> Protein A purified		<b>Cross Reactivity:-</b>			

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