SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

Rabbit Anti-PCNA antibody

SL2007R

Product Name	PCNA
Chinese Name	增殖 The nucleus 抗原抗体
Alias	Proliferation Marker; Cyclin; DNA polymerase delta auxiliary protein; HGCN8729; MGC8367; Mutagen-sensitive 209 protein; Pcna/cyclin; PCNAR; Polymerase delta accessory protein; Proliferating Cell Nuclear Antigen; PCNA_HUMAN.
Research Area	Tumour Cell biology immunology Chromatin and nuclear signals Cyclin Cell differentiation Cell type markers
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human,Mouse,Rat(predicted:Cow)
Applications	WB=1:500-2000 ELISA=1:5000-10000 IHC-P=1:100-500 IHC-F=1:100-500 Flow-Cyt=1μg/Test IF=1:100-500 （Paraffin sections need antigen repair） WB IHC-P IHC-F IF Flow-Cyt,WB=1:500-2000,IHC-P=1:200-800,IHC-F=1:200-800,IF=1:200-800,Flow-Cyt=1μg/Test not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	29kDa
Cellular localization	The nucleus
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human PCNA: 201-261/261
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer	Human,Mouse,Rat(predicted:Cow)1M TBS(pH7.4) with 1% BSA,

Solution	Human,Mouse,Rat(predicted:Cow)3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
PubMed	PubMed

Product Detail

Proliferation Marker

Proliferating cell nuclear antigen (PCNA) is a 28kDa nuclear protein associated with the cell cycle, a nuclear protein vital for cellular DNA synthesis. Proliferating cell nuclear antigen was originally identified by immunofluorescence as a nuclear protein whose appearance correlated with the proliferate state of the cell. PCNA is required for replication of DNA in vitro and has been identified as the auxiliary protein (cofactor) for DNA polymerase delta. The anti-PCNA antibodies react with the nuclei of proliferating cells. PCNA is essential for cellular DNA synthesis and is also required for the in vitro replication of simian virus 40 (SV40) DNA where it acts to coordinate leading and lagging strand synthesis at the replication fork. The PCNA protein may fulfil several separate roles in the cell nucleus associated with changes in its antigenic structure。

Function:
Auxiliary protein of DNA polymerase delta and is involved in the control of eukaryotic DNA replication by increasing the polymerase's processibility during elongation of the leading strand. Induces a robust stimulatory effect on the 3'-5' exonuclease and 3'-phosphodiesterase, but not apurinic-apyrimidinic (AP) endonuclease, APEX2 activities. Has to be loaded onto DNA in order to be able to stimulate APEX2. Plays a key role in DNA damage response (DDR) by being conveniently positioned at the replication fork to coordinate DNA replication with DNA repair and DNA damage tolerance pathways. Acts as a loading platform to recruit DDR proteins that allow completion of DNA replication after DNA damage and promote postreplication repair: Monoubiquitinated PCNA leads to recruitment of translesion (TLS) polymerases, while 'Lys-63'-linked polyubiquitination of PCNA is involved in error-free pathway and employs recombination mechanisms to synthesize across the lesion.

Subunit:
Homotrimer (By similarity). Forms a complex with activator 1 heteropentamer in the presence of ATP. Interacts with EXO1, POLH, POLK, DNMT1, ERCC5, FEN1, CDC6 and POLDIP2. Interacts with APEX2; this interaction is triggered by reactive oxygen species and increased by misincorporation of uracil in nuclear DNA. Forms a ternary complex with DNTTIP2 and core histone. Interacts with KCTD10 and PPP1R15A (By similarity). Interacts with POLD1, POLD3 and POLD4. Interacts with BAZ1B; the interaction is direct. Interacts with HLTF and SHPRH. Interacts with NUDT15. Interaction is disrupted in response to UV

irradiation and acetylation. Interacts with CDKN1A/p21(CIP1) and CDT1; interacts via their PIP-box which also recruits the DCX(DTL) complex. Interacts with DDX11. Interacts with EGFR; positively regulates PCNA. Interacts with PARPBP. Interacts (when ubiquitinated) with SPRTN; leading to enhance RAD18-mediated PCNA ubiquitination. Interacts (when polyubiquitinated) with ZRANB3. Interacts with SMARCAD1. Interacts with CDKN1C. Interacts with KIAA0101/PAF15 (via PIP-box).

Subcellular Location:
Nucleus. Note=Forms nuclear foci representing sites of ongoing DNA replication and vary in morphology and number during S phase. Together with APEX2, is redistributed in discrete nuclear foci in presence of oxidative DNA damaging agents.

Post-translational modifications:
Following DNA damage, can be either monoubiquitinated to stimulate direct bypass of DNA lesions by specialized DNA polymerases or polyubiquitinated to promote recombination-dependent DNA synthesis across DNA lesions by template switching mechanisms. Following induction of replication stress, monoubiquitinated by the UBE2B-RAD18 complex on Lys-164, leading to recruit translesion (TLS) polymerases, which are able to synthesize across DNA lesions in a potentially error-prone manner. An error-free pathway also exists and requires non-canonical polyubiquitination on Lys-164 through 'Lys-63' linkage of ubiquitin moieties by the E2 complex UBE2N-UBE2V2 and the E3 ligases, HLTF, RNF8 and SHPRH. This error-free pathway, also known as template switching, employs recombination mechanisms to synthesize across the lesion, using as a template the undamaged, newly synthesized strand of the sister chromatid. Monoubiquitination at Lys-164 also takes place in undamaged proliferating cells, and is mediated by the DCX(DTL) complex, leading to enhance PCNA-dependent translesion DNA synthesis. Sumoylated during S phase.
Acetylated in response to UV irradiation. Acetylation disrupts interaction with NUDT15 and promotes degradation.
Phosphorylated. Phosphorylation at Tyr-211 by EGFR stabilizes chromatin-associated PCNA.

Similarity:
Belongs to the PCNA family.

SWISS:
P12004

Gene ID:
5111

Database links:

Entrez Gene: 515499 Cow

Entrez Gene: 5111 Human

Entrez Gene: 18538 Mouse

Entrez Gene: 25737 Rat

Omim: 176740 Human

SwissProt: Q3ZBW4 Cow

SwissProt: P12004 Human

SwissProt: P17918 Mouse

SwissProt: P04961 Rat

Unigene: 147433 Human

Unigene: 728886 Human

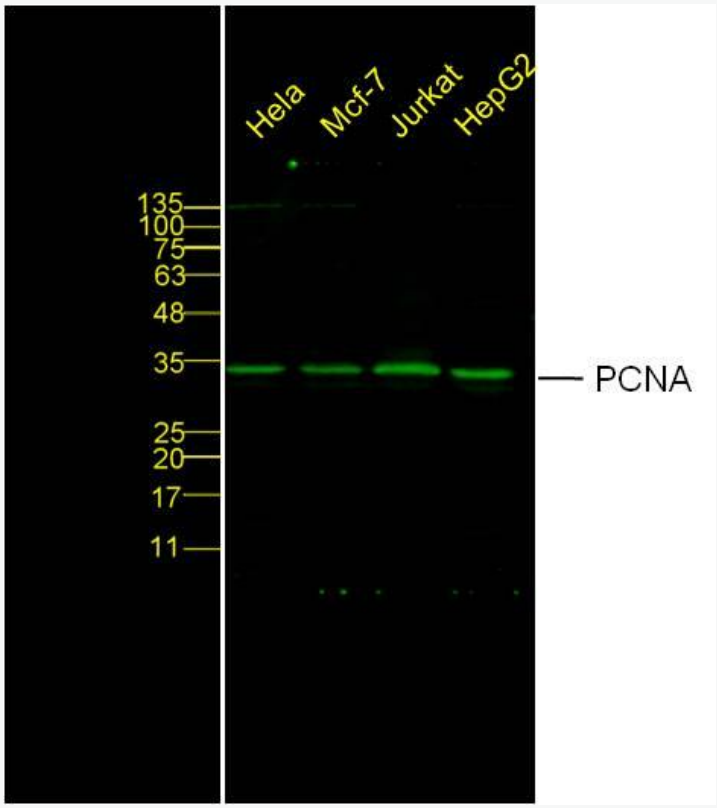
Unigene: 7141 Mouse

Unigene: 223 Rat

PCNA 是一种仅在增殖细胞中合成或表达的核内多肽，其表达和合成与细胞周期有关。主要表达于增殖细胞的 S 期、G1 期和 G2 初期。
PCNA 主要作为判断各种恶性 Tumour(包括胃肠道癌肿、乳腺癌、肝癌、膀胱癌等)细胞增殖和其恶性程度的一种指标.

SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

Product Picture



Sample:

Hela Cell Lysate at 40 ug

MCF-7 Cell Lysate at 40 ug

Jurkat Cell Lysate at 40 ug

HepG2 Cell Lysate at 40 ug

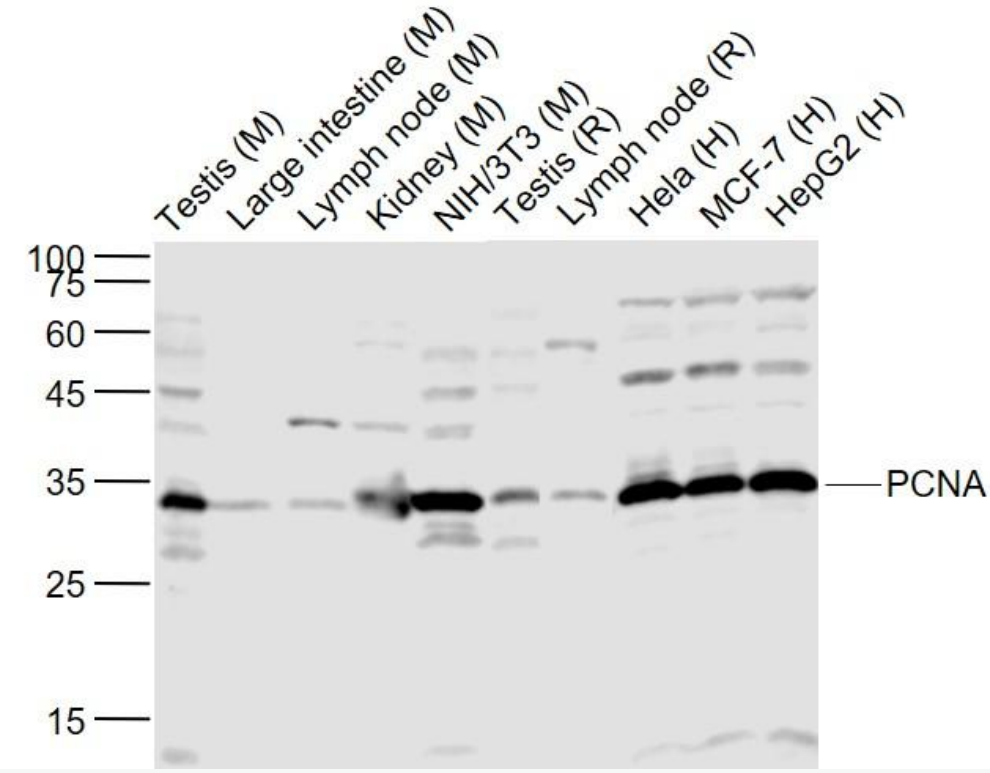
Primary: Anti- PCNA(SL2007R) at 1/2000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 29 kD

Observed band size: 34 kD

SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com



Sample:

Lane 1: Testis (Mouse) Lysate at 40 ug

Lane 2: Large intestine (Mouse) Lysate at 40 ug

Lane 3: Lymph node (Mouse) Lysate at 40 ug

Lane 4: Kidney (Mouse) Lysate at 40 ug

Lane 5: NIH/3T3 (Mouse) Cell Lysate at 30 ug

Lane 6: Testis (Rat) Lysate at 40 ug

Lane 7: Lymph node (Rat) Lysate at 40 ug

Lane 8: Hela (Human) Cell Lysate at 30 ug

Lane 9: MCF-7 (Human) Cell Lysate at 30 ug

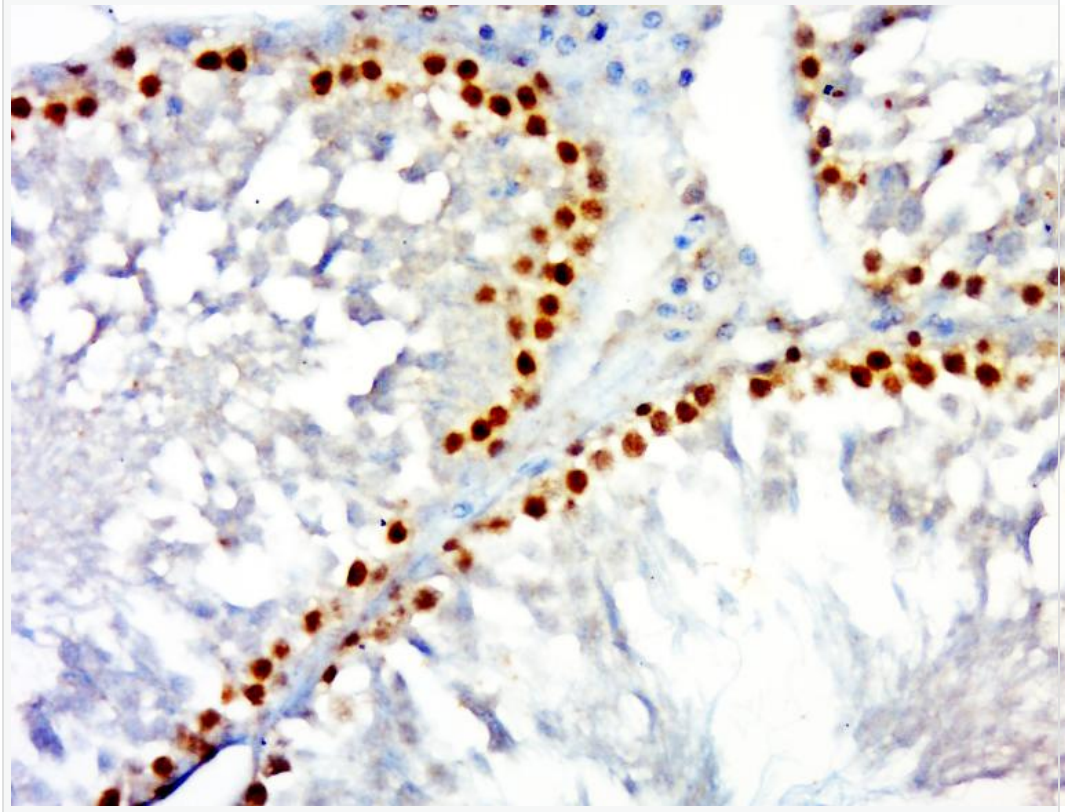
Lane 10: HepG2 (Human) Cell Lysate at 30 ug

Primary: Anti-PCNA (SL2007R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

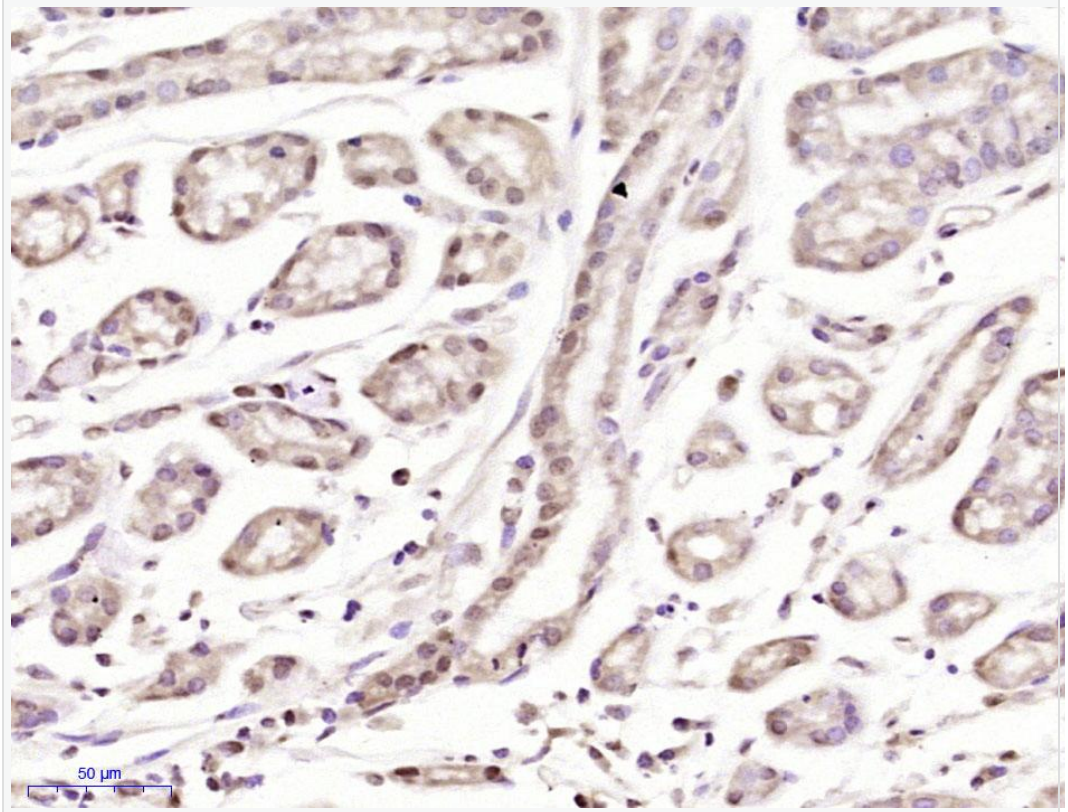
Predicted band size: 36 kD

Observed band size: 34 kD



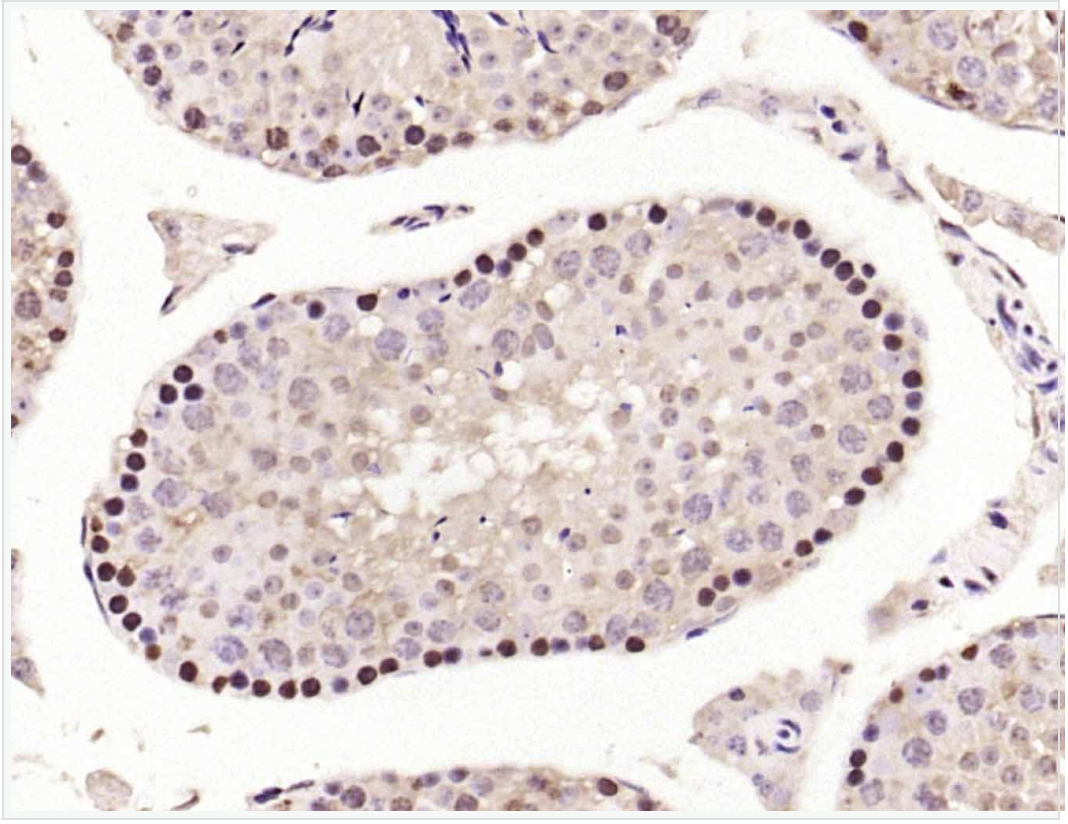
Paraformaldehyde-fixed, paraffin embedded (rat testis); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PCNA) Polyclonal Antibody, Unconjugated (SL2007R) at 1:500 overnight at 4°C, followed by a

conjugated secondary (sp-0023) for 20 minutes and DAB staining.



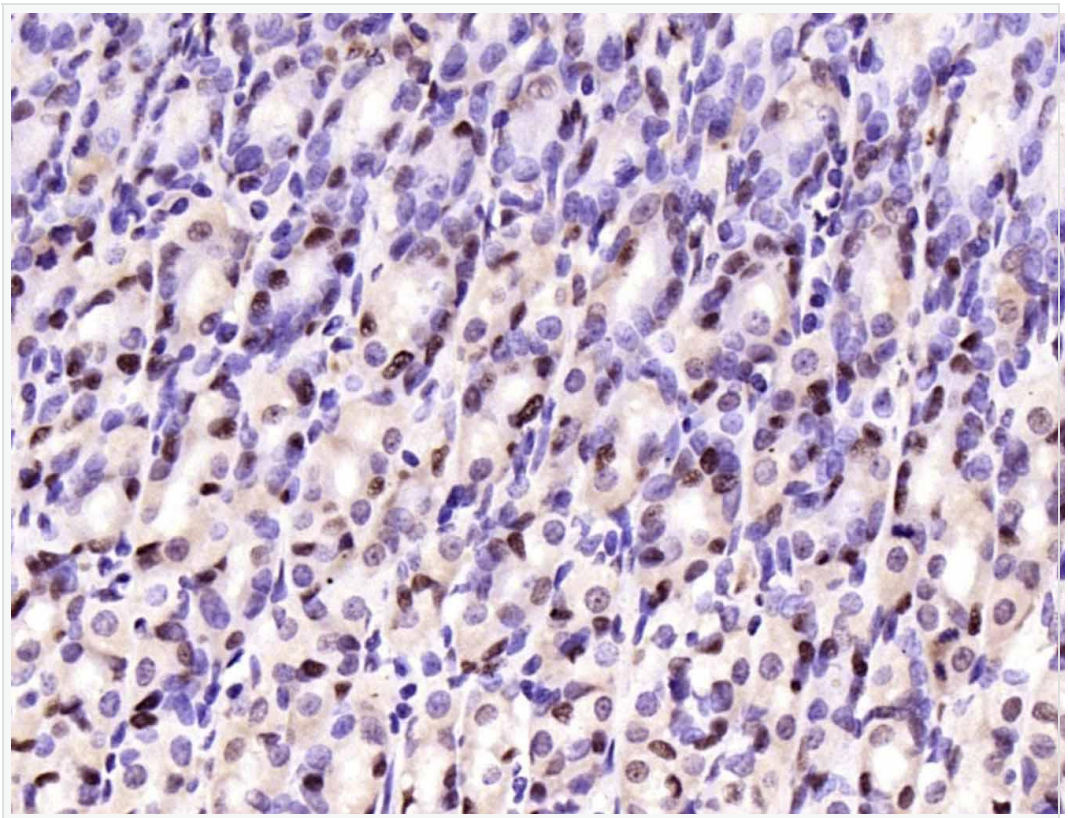
Paraformaldehyde-fixed, paraffin embedded (human gastric carcinoma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PCNA) Polyclonal Antibody, Unconjugated (SL2007R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com



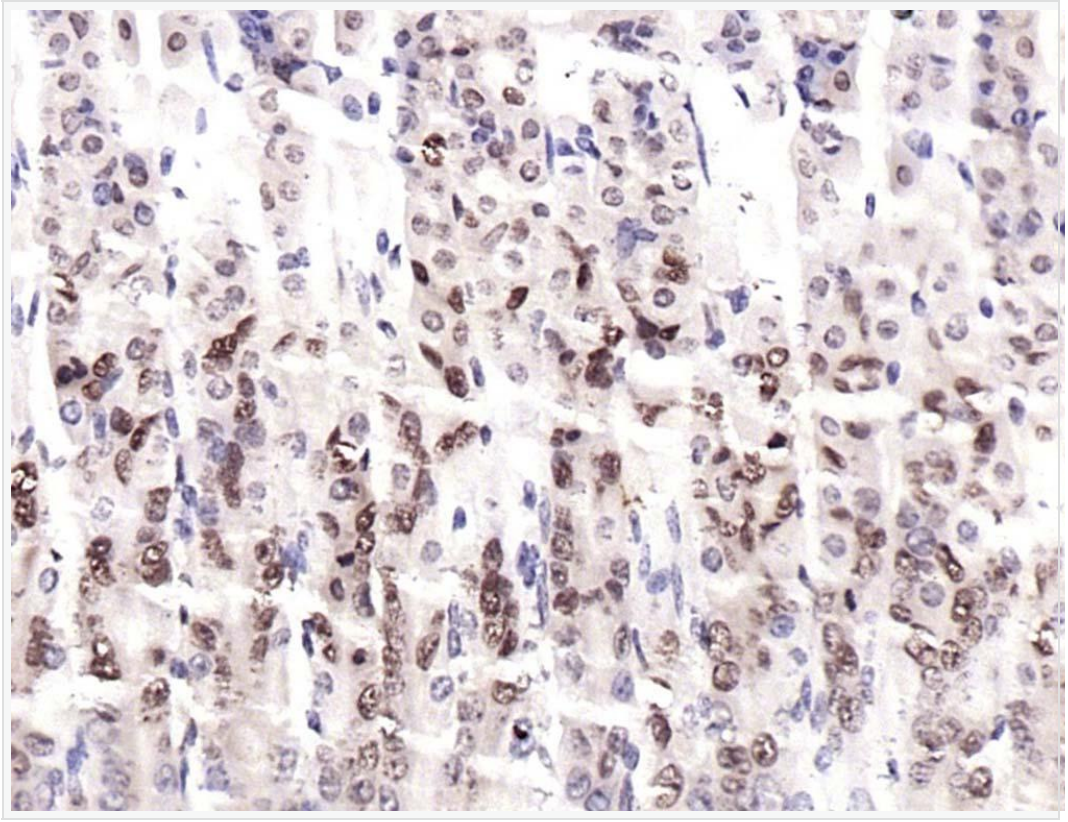
Paraformaldehyde-fixed, paraffin embedded (mouse testis); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PCNA) Polyclonal Antibody, Unconjugated (SL2007R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com



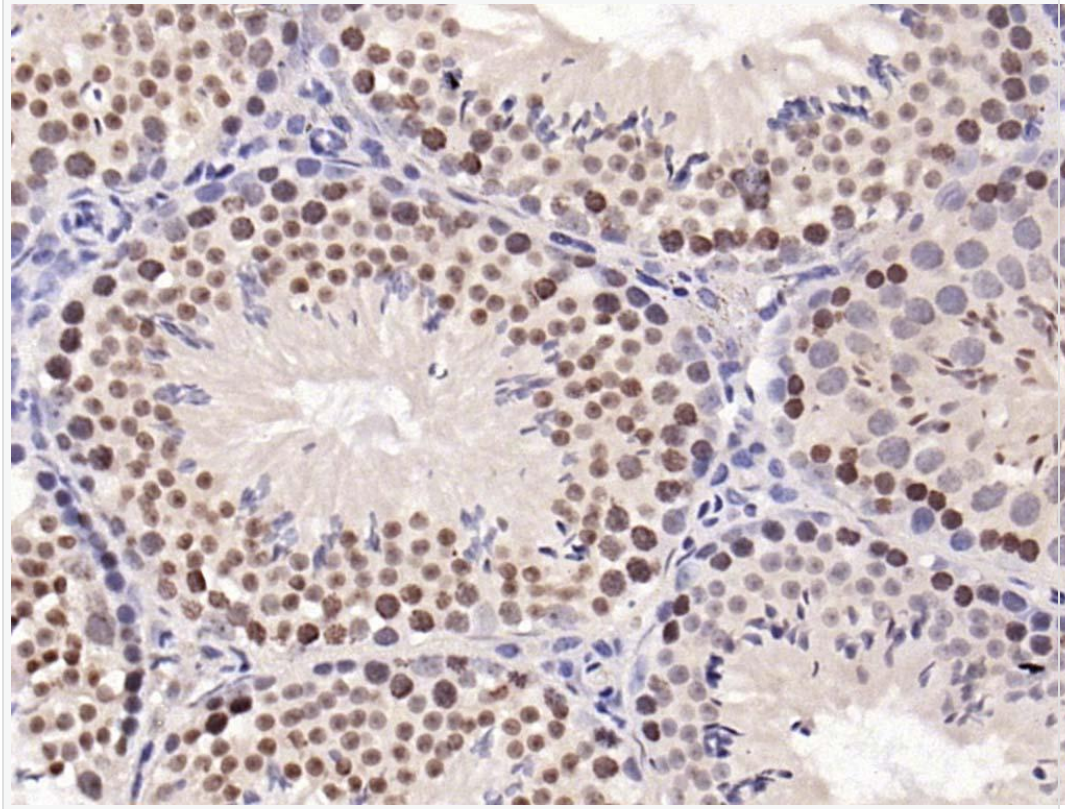
Paraformaldehyde-fixed, paraffin embedded (rat stomach); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PCNA) Polyclonal Antibody, Unconjugated (SL2007R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com



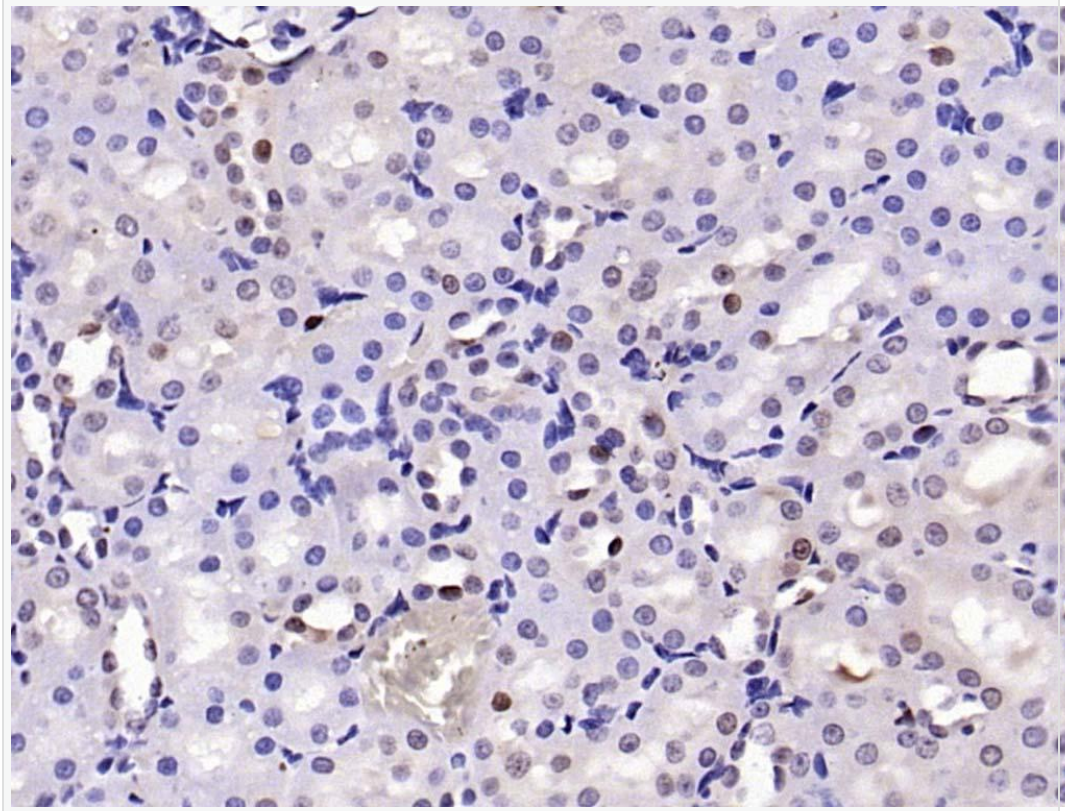
Paraformaldehyde-fixed, paraffin embedded (rat stomach); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PCNA) Polyclonal Antibody, Unconjugated (SL2007R) at 1:2000 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com



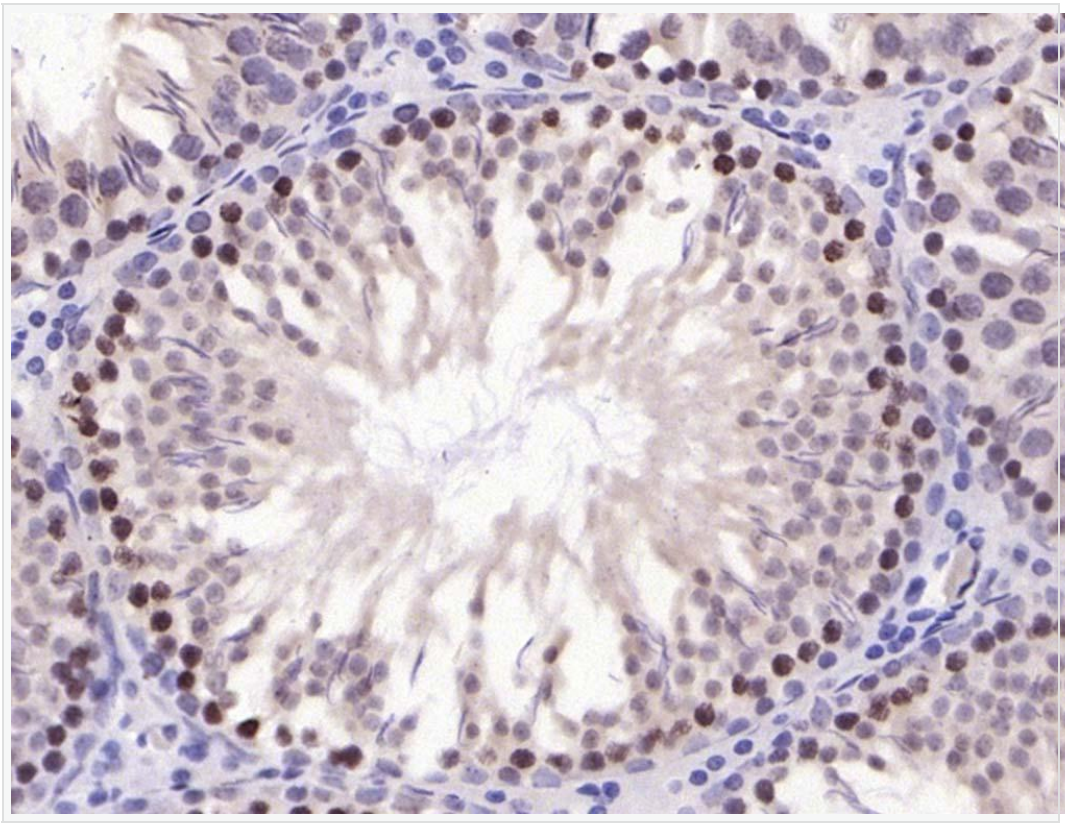
Paraformaldehyde-fixed, paraffin embedded (mouse testis); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PCNA) Polyclonal Antibody, Unconjugated (SL2007R) at 1:2000 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com



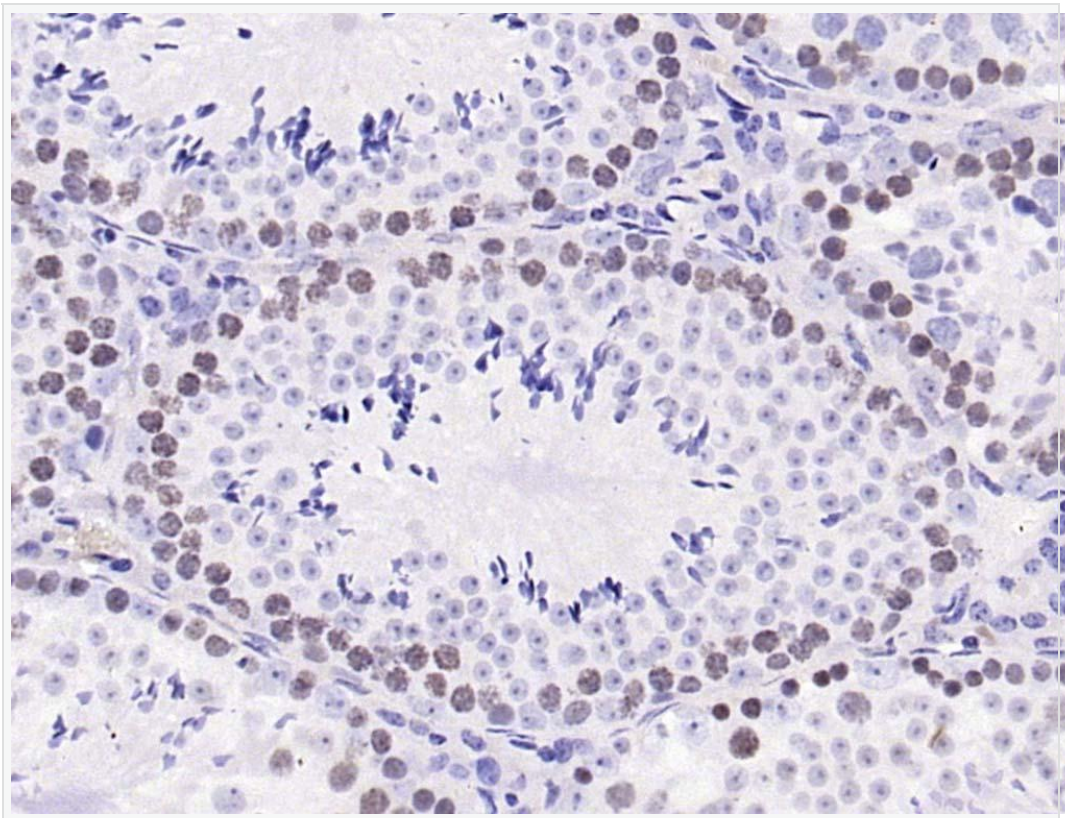
Paraformaldehyde-fixed, paraffin embedded (mouse kidney); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PCNA) Polyclonal Antibody, Unconjugated (SL2007R) at 1:2000 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com



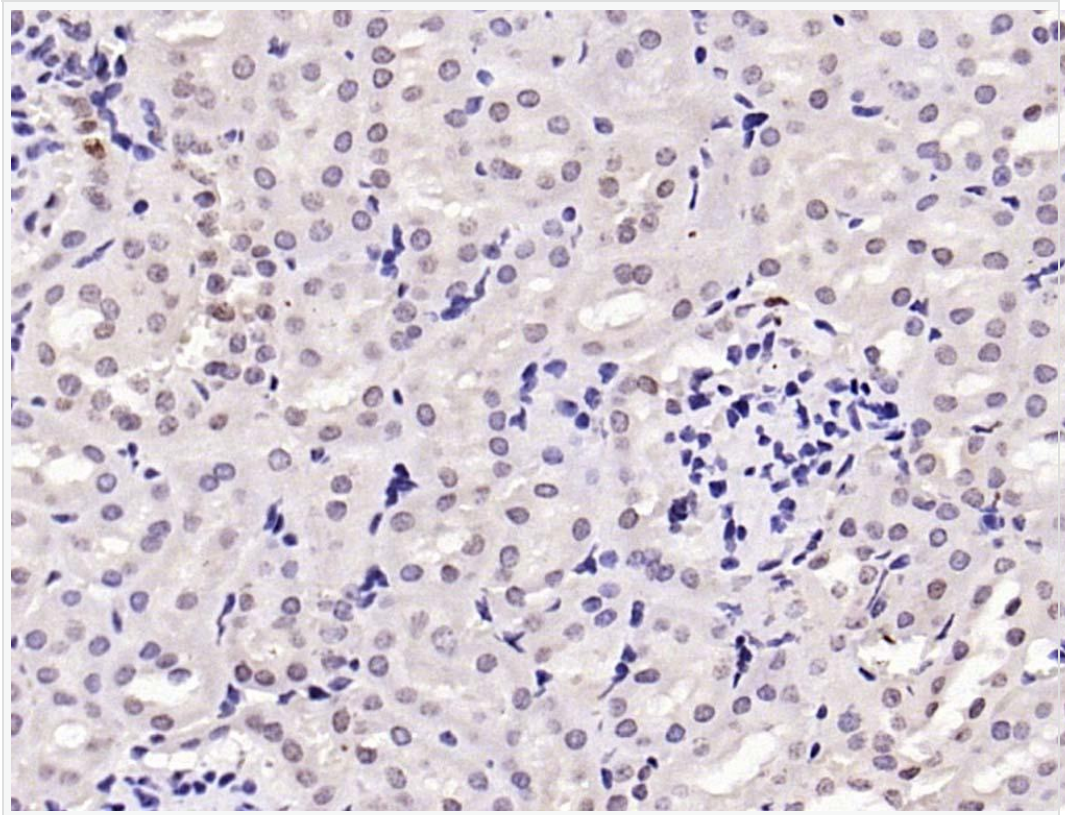
Paraformaldehyde-fixed, paraffin embedded (rat testis); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PCNA) Polyclonal Antibody, Unconjugated (SL2007R) at 1:2000 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com



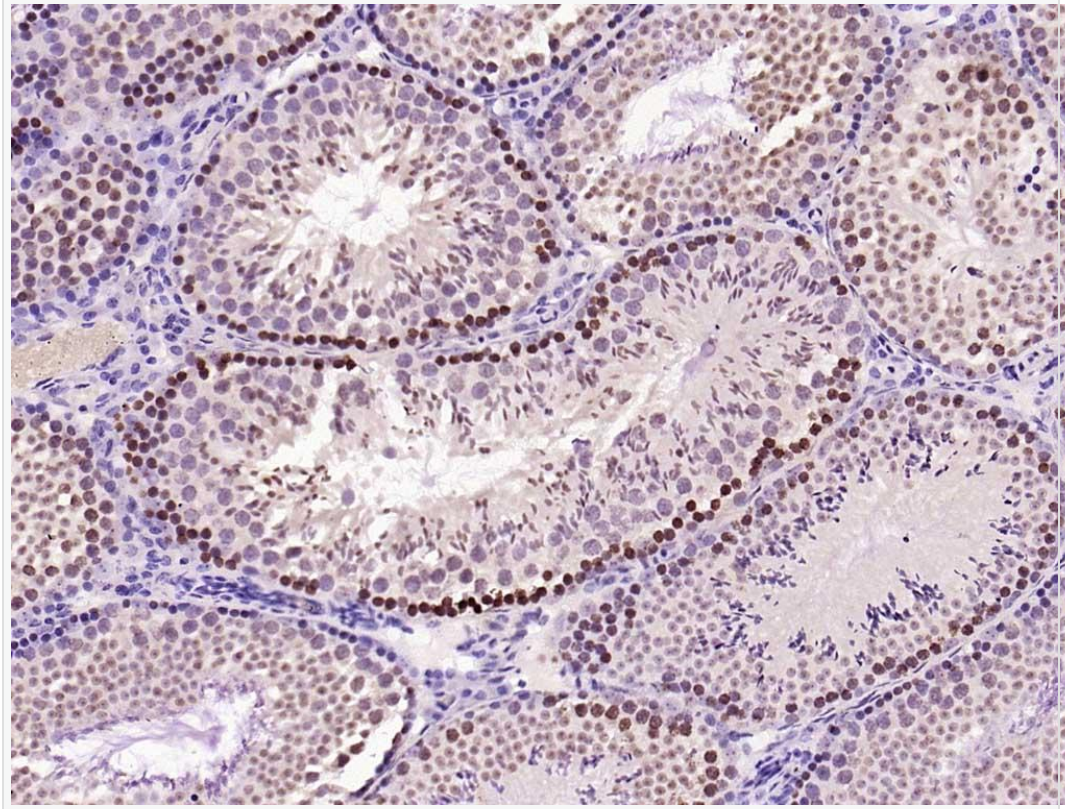
Paraformaldehyde-fixed, paraffin embedded (mouse testis); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PCNA) Polyclonal Antibody, Unconjugated (SL2007R) at 1:2000 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com



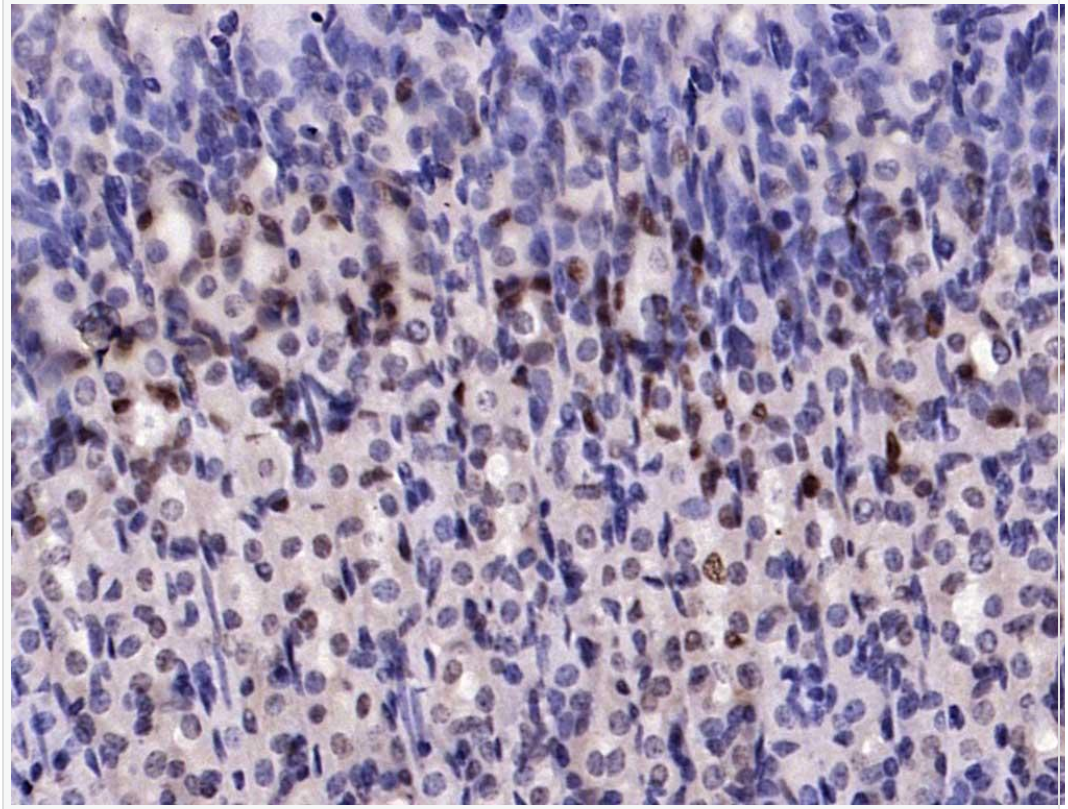
Paraformaldehyde-fixed, paraffin embedded (rat kidney); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PCNA) Polyclonal Antibody, Unconjugated (SL2007R) at 1:2000 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com



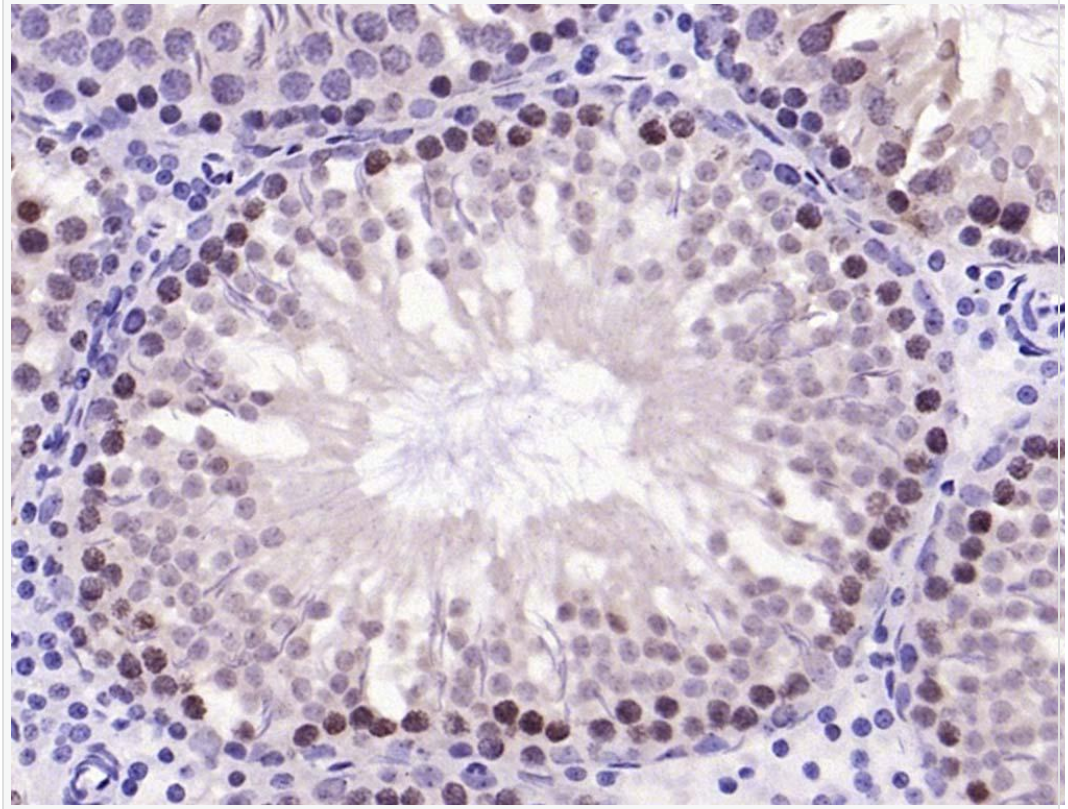
Paraformaldehyde-fixed, paraffin embedded (rat testis); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PCNA) Polyclonal Antibody, Unconjugated (SL2007R) at 1:2000 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com



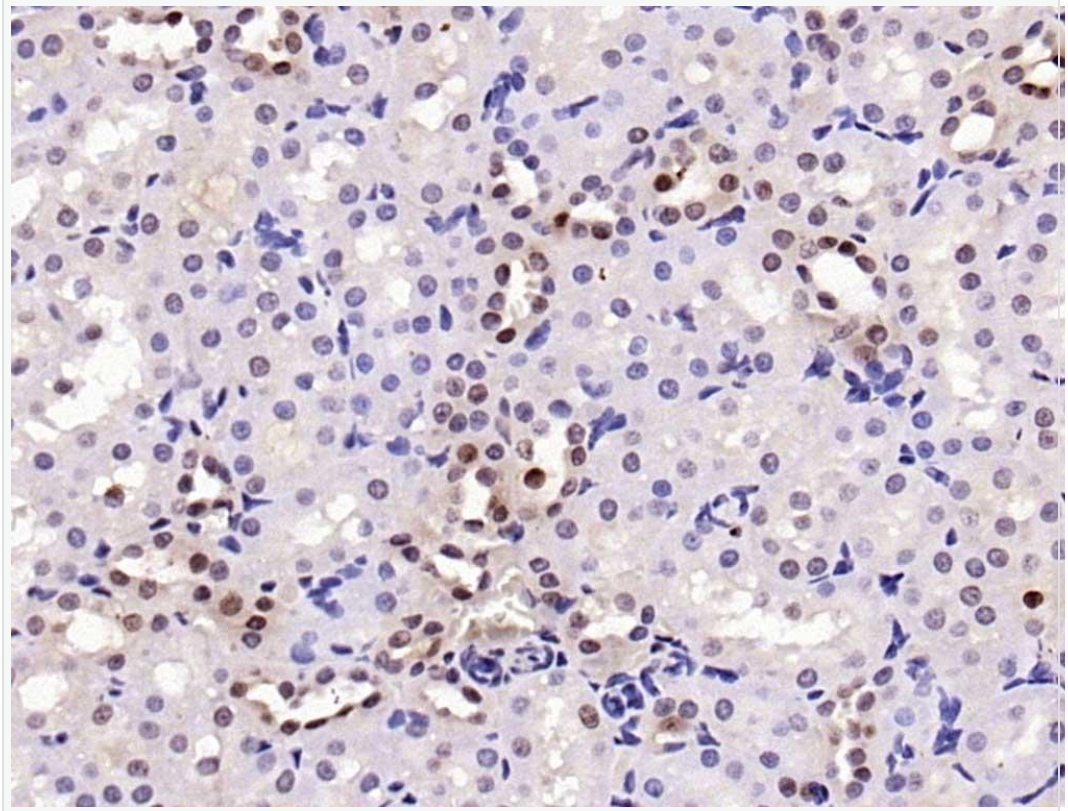
Paraformaldehyde-fixed, paraffin embedded (mouse stomach); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PCNA) Polyclonal Antibody, Unconjugated (SL2007R) at 1:2000 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com



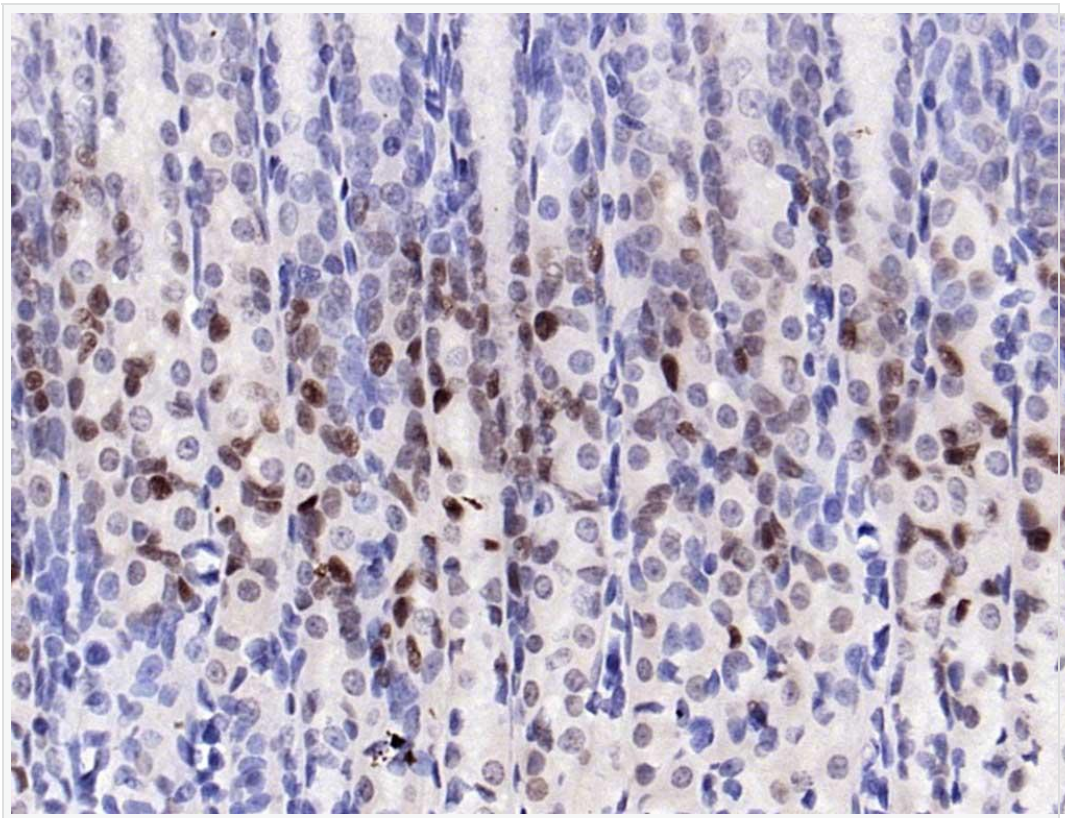
Paraformaldehyde-fixed, paraffin embedded (rat testis); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PCNA) Polyclonal Antibody, Unconjugated (SL2007R) at 1:2000 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com



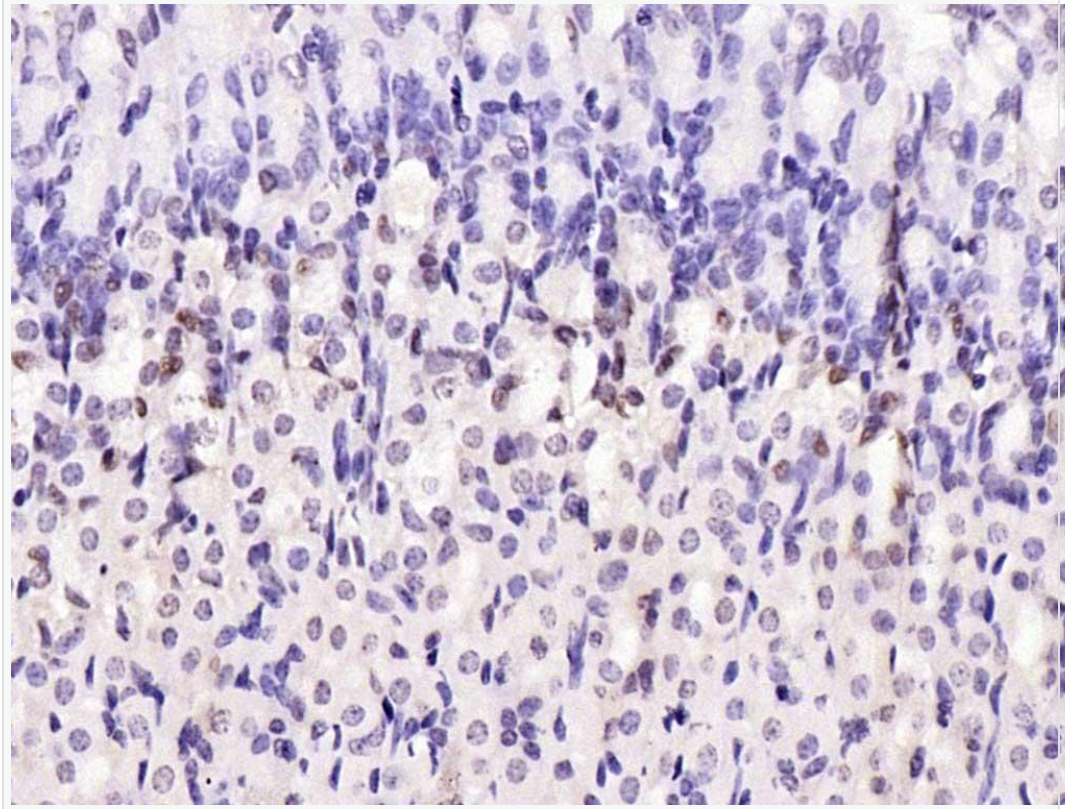
Paraformaldehyde-fixed, paraffin embedded (mouse kidney); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PCNA) Polyclonal Antibody, Unconjugated (SL2007R) at 1:2000 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com



Paraformaldehyde-fixed, paraffin embedded (rat stomach); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PCNA) Polyclonal Antibody, Unconjugated (SL2007R) at 1:2000 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com



Paraformaldehyde-fixed, paraffin embedded (mouse stomach); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PCNA) Polyclonal Antibody, Unconjugated (SL2007R) at 1:2000 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.