

Rabbit Anti-TMP21 antibody

SL11262R

Product Name [KO validated anti] TMP21

Chinese Name 跨膜 Transporter21 抗体

Alias p23; p24 family protein delta 1; p24delta; p24delta1; S31I125; S31III125; TMED 10; TMED10; Tmp 21 I; Tmp 21; Tmp 21 I; Transmembrane emp24 domain containing protein 10; Transmembrane emp24-like trafficking protein 10 (yeast); Transmembrane protein Tmp21; Transmembrane trafficking protein 21kD; 1110014C03Rik; 21 kDa transmembrane trafficking protein; MGC102351; TMEDA_HUMAN.

Research Area Cell biology Neurobiology Signal transduction

Immunogen Species Rabbit

Clonality Polyclonal

React Species Human, Mouse, Rat, (predicted: Chicken, Dog, Cow, Rabbit,)

Applications WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 (Paraffin sections need antigen repair)
not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight 22kDa

Cellular localization cytoplasmic The cell membrane

Form Liquid

Concentration 1mg/ml

immunogen KLH conjugated synthetic peptide derived from human TMP21: 101-200/219

Lsotype IgG

Purification affinity purified by Protein A

Buffer Solution 1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

Storage Shipped at 4°C. 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](#)

TMP21 is a member of the EMP24/GP25L/p24 cargo family of proteins that regulates vesicular trafficking in the early secretory pathway. TMP21 is a ubiquitously expressed single-pass type I membrane protein localizing to the Golgi cisternae and the plasma membrane. It contains one GOLD (Golgi dynamics) domain and participates in protein transport and quality control between the endoplasmic reticulum (ER) and the Golgi complex. In addition, TMP21 is a component of the heteromeric secretase complex (or Presenilin complex) and functions to regulate the γ secretase activity. Two isoforms, namely TMP21-I and TMP21-II, exist for this protein.

Function:

Involved in vesicular protein trafficking. Mainly functions in the early secretory pathway. Thought to act as cargo receptor at the luminal side for incorporation of secretory cargo molecules into transport vesicles and to be involved in vesicle coat formation at the cytoplasmic side. In COPII vesicle-mediated anterograde transport involved in the transport of GPI-anchored proteins and proposed to act together with TMED2 as their cargo receptor; the function specifically implies SEC24C and SEC24D of the COPII vesicle coat and lipid raft-like microdomains of the ER. Recognizes GPI anchors structural remodeled in the ER by PGAP1 and MPPE1 (By similarity). In COPI vesicle-mediated retrograde transport involved in the biogenesis of COPI vesicles and vesicle coat recruitment. On Golgi membranes, acts as primary receptor for ARF1-GDP which is involved in COPI-vesicle formation. Increases coatomer-dependent GTPase-activating activity of ARFGAP2. Involved in trafficking of G protein-coupled receptors (GPCRs). Regulates F2LR1, OPRM1 and P2RY4 exocytic trafficking from the Golgi to the plasma membrane thus contributing to receptor resensitization. Involved in trafficking of amyloid beta A4 protein and soluble APP-beta release (independent of modulation of gamma-secretase activity). As part of the presenilin-dependent gamma-secretase complex regulates gamma-cleavages of the amyloid beta A4 protein to yield amyloid-beta 40 (Abeta40). Involved in organization of the Golgi apparatus.

Product Detail

Subunit:

Predominantly homodimeric and to lesser extent monomeric in endoplasmic reticulum. Homodimer and monomer in endoplasmic reticulum-Golgi intermediate compartment and cis-Golgi network. Probably oligomerizes with other members of the EMP24/GP25L family such as TMED2, TMED7 and TMED9. Interacts with TMED2. Associates with the COPI vesicle coat (coatomer); TMED10:TMED2 heterotetramers are proposed to be involved in coatomer association. Interacts (via C-terminus) with COPG1; the interaction involves dimeric TMED10. Interacts with ARF1 (GDP-bound); the interaction probably involves a TMED10 oligomer. Interacts with SEC23A; indicative for an association of TMED10 with the COPII vesicle coat. Interacts with CD59, SEC24B, SEC24C and SEC24D (By similarity). Interacts with MPPE1/PGAP5. Interacts with F2LR1. Interacts with KDELR2; the interaction is disrupted by KDELR2 ligand (By similarity). Found in a

complex composed at least of SURF4, TMED2 and TMED10. Associates with the presenilin-dependent gamma-secretase complex.

Subcellular Location:

Golgi apparatus, cis-Golgi network membrane; Single-pass type I membrane protein. Melanosome. Endoplasmic reticulum membrane; Single-pass type I membrane protein. Endoplasmic reticulum-Golgi intermediate compartment membrane; Single-pass type I membrane protein. Cytoplasmic vesicle, secretory vesicle membrane; Single-pass type I membrane protein (By similarity). Cell membrane (By similarity). Golgi apparatus, trans-Golgi network membrane; Single-pass type I membrane protein (By similarity). Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV. Cycles between compartments of the early secretory pathway.

Tissue Specificity:

Ubiquitous.

Similarity:

Belongs to the EMP24/GP25L family.
Contains 1 GOLD domain.

SWISS:

P49755

Gene ID:

10972

Database links:

[Entrez Gene: 10972](#) Human

[Entrez Gene: 68581](#) Mouse

[Entrez Gene: 84599](#) Rat

[Omim: 605406](#) Human

[SwissProt: P49755](#) Human

[SwissProt: Q9D1D4](#) Mouse

[SwissProt: Q63584](#) Rat

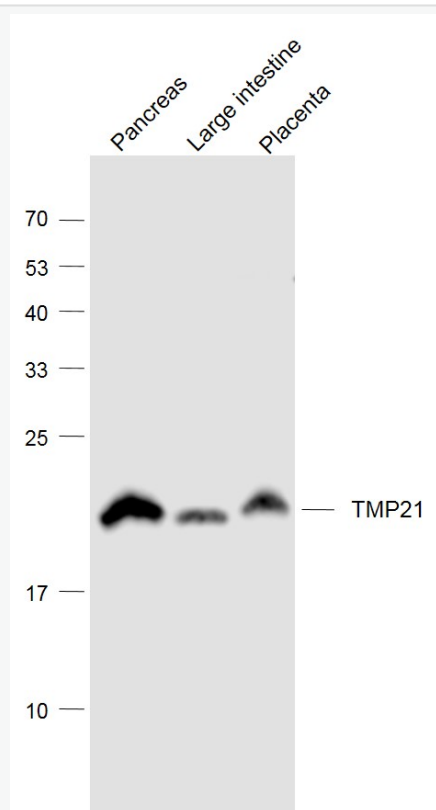
[Unigene: 74137](#) Human

[Unigene: 379159](#) Mouse

[Unigene: 472063](#) Mouse

[Unigene: 8509](#) Rat

**Product
Picture**



Sample:

Pancreas (Mouse) Lysate at 40 ug

Large intestine (Mouse) Lysate at 40 ug

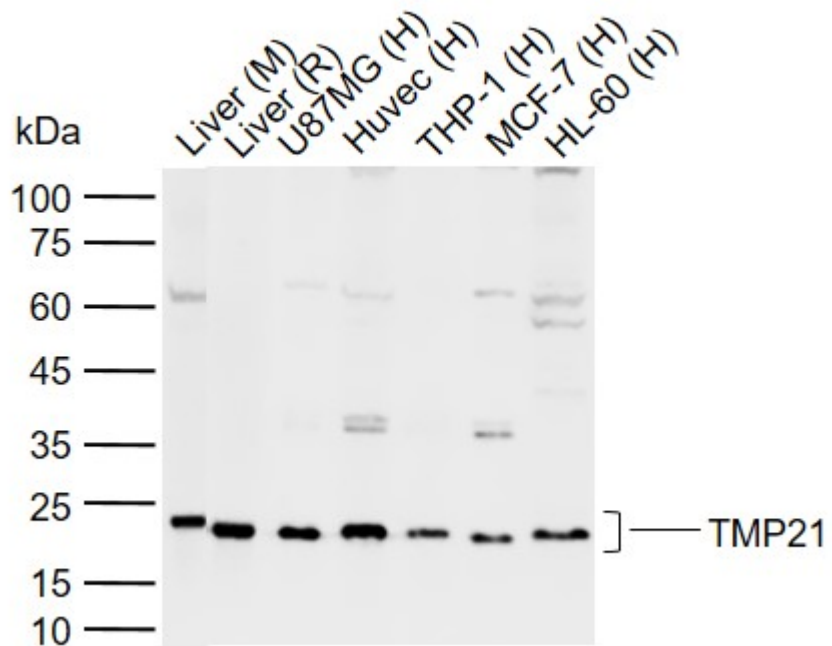
Placenta (Mouse) Lysate at 40 ug

Primary: Anti-TMP21 (SL11262R) at 1/1000 dilution

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

Predicted band size: 22 kD

Observed band size: 22 kD



Sample:

Lane 1: Mouse Liver tissue lysates

Lane 2: Rat Liver tissue lysates

Lane 3: Human U87MG cell lysates

Lane 4: Human Huvec cell lysates

Lane 5: Human THP-1 cell lysates

Lane 6: Human MCF-7 cell lysates

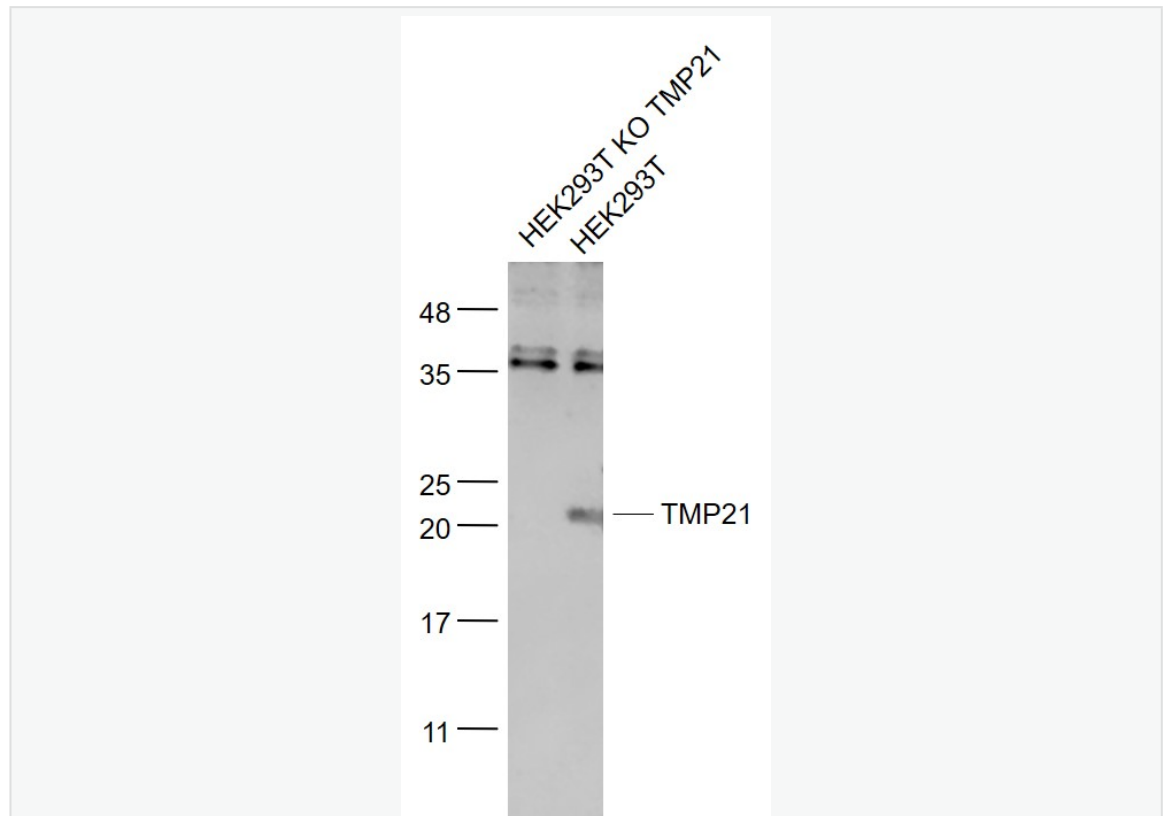
Lane 7: Human HL-60 cell lysates

Primary: Anti- TMP21 (SL11262R) at 1/1000 dilution

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

Predicted band size: 22 kDa

Observed band size: 22 kDa



Sample:

HEK293T KO TMP21(Human) Cell Lysate at 30 ug

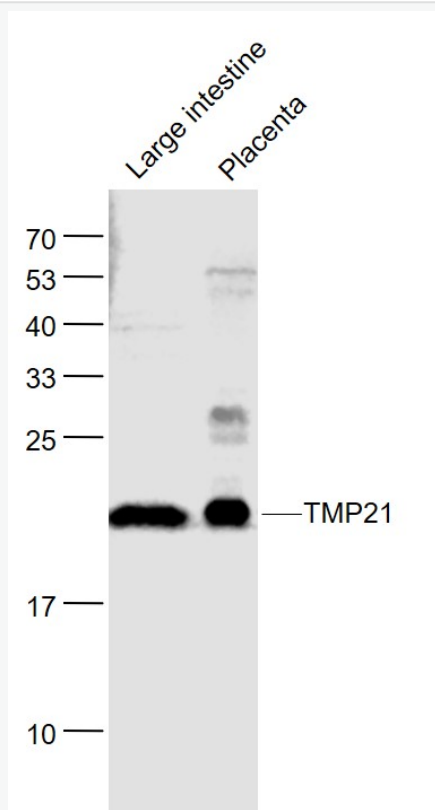
HEK293T(Human) Cell Lysate at 30 ug

Primary: Anti-TMP21 (SL11262R) at 1/1000 dilution

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

Predicted band size: 22 kD

Observed band size: 22 kD



Sample:

Large intestine (Mouse) Lysate at 40 ug

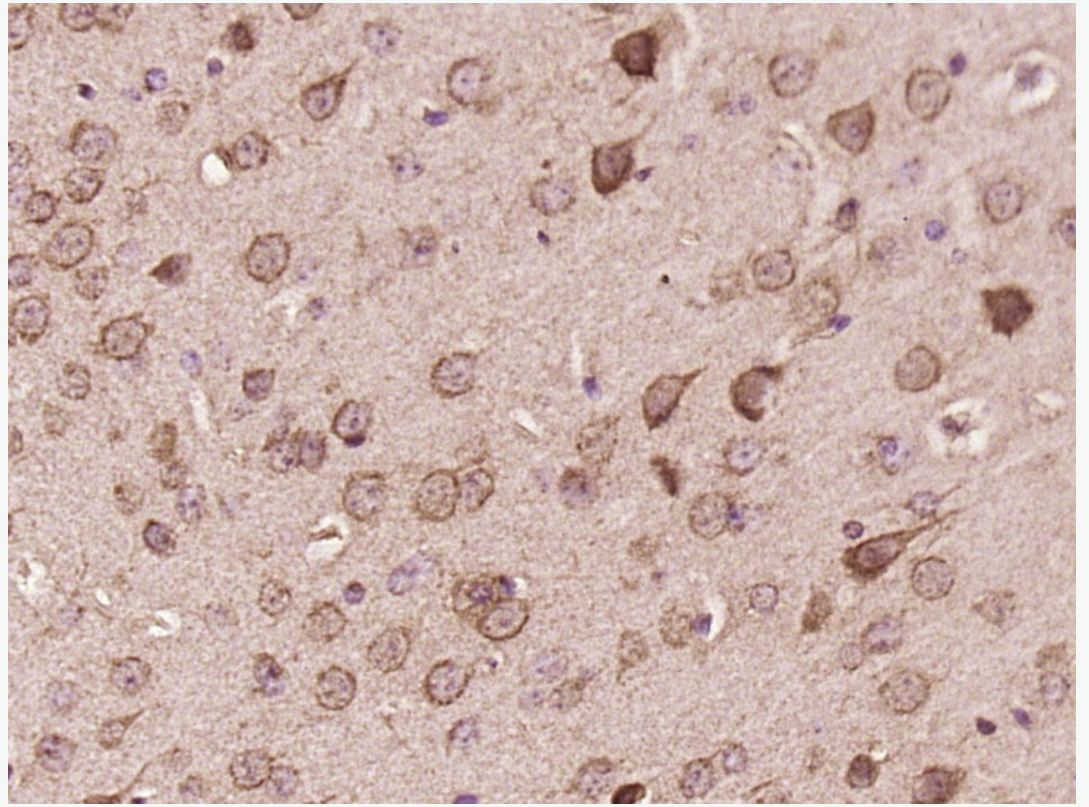
Placenta (Mouse) Lysate at 40 ug

Primary: Anti- TMP21 (SL11262R) at 1/1000 dilution

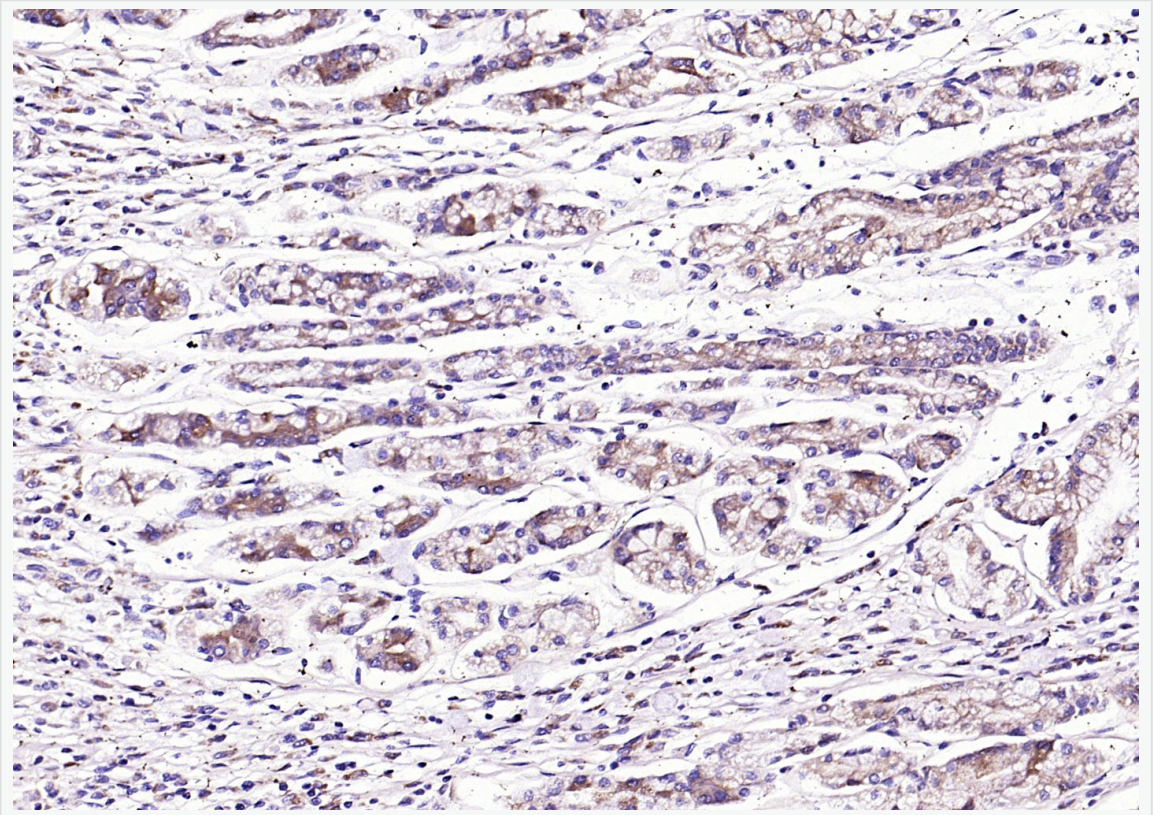
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 22 kD

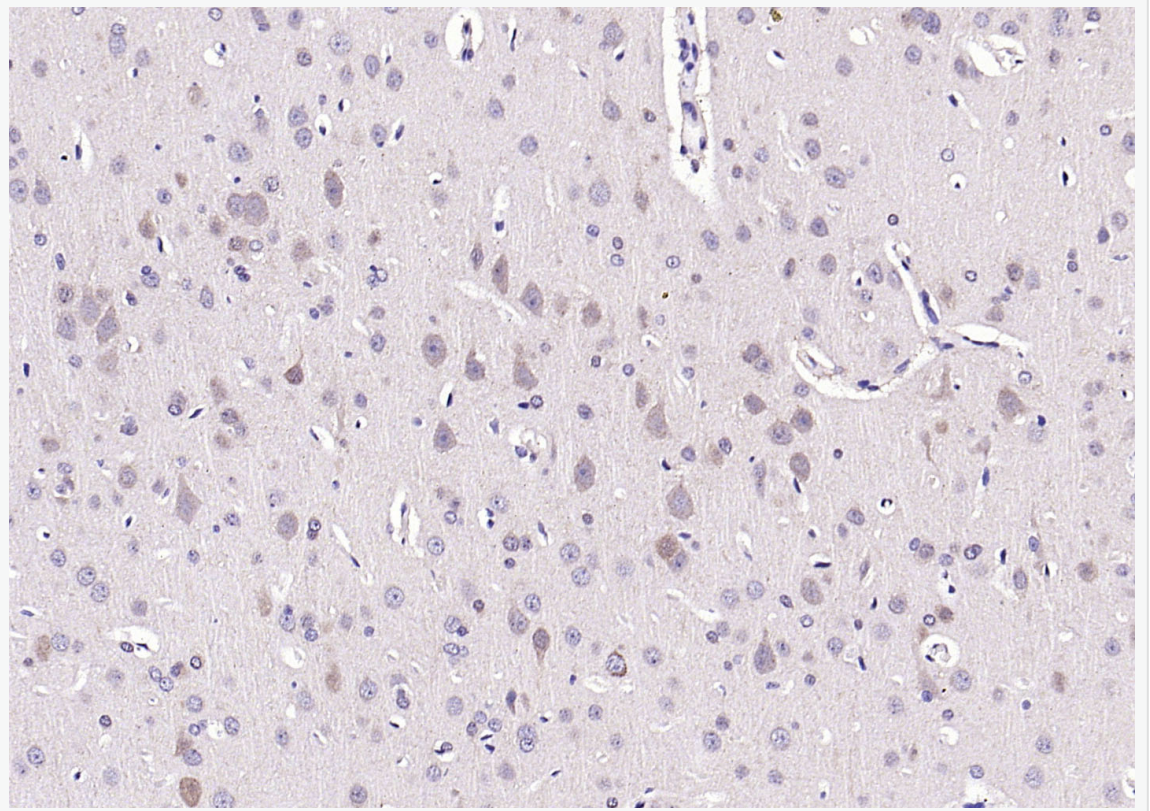
Observed band size: 22 kD



Paraformaldehyde-fixed, paraffin embedded (mouse brain tissue); 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 (TMP21) Polyclonal Antibody, Unconjugated (SL11262R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions 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 (TMP21) Polyclonal Antibody, Unconjugated (SL11262R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (rat brain); 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 (TMP21) Polyclonal Antibody, Unconjugated (SL11262R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.