



## Rabbit Anti-Thioredoxin antibody

SL0458R

**Product Name** Thioredoxin

**Chinese Name** 硫氧还蛋白抗体

**Alias** ADF; Surface associated sulphhydryl protein; Thioredoxin-1; Thioredoxin 1; Thioredoxin1; TXN1; ATL derived factor; DKFZp686B1993; MGC61975; SASP; Surface associated sulphhydryl protein; Surface-associated sulphhydryl protein; Thioredoxin; TRDX; TRX 1; TRX; TRX1; TXN; TXN1; TXN2; TXN3; TXN4; TXN5; TXN6; TXN7; TXN8; TXN9; TXN10; TXN11; TXN12; TXN13; TXN14; TXN15; TXN16; TXN17; TXN18; TXN19; TXN20; TXN21; TXN22; TXN23; TXN24; TXN25; TXN26; TXN27; TXN28; TXN29; TXN30; TXN31; TXN32; TXN33; TXN34; TXN35; TXN36; TXN37; TXN38; TXN39; TXN40; TXN41; TXN42; TXN43; TXN44; TXN45; TXN46; TXN47; TXN48; TXN49; TXN50; TXN51; TXN52; TXN53; TXN54; TXN55; TXN56; TXN57; TXN58; TXN59; TXN60; TXN61; TXN62; TXN63; TXN64; TXN65; TXN66; TXN67; TXN68; TXN69; TXN70; TXN71; TXN72; TXN73; TXN74; TXN75; TXN76; TXN77; TXN78; TXN79; TXN80; TXN81; TXN82; TXN83; TXN84; TXN85; TXN86; TXN87; TXN88; TXN89; TXN90; TXN91; TXN92; TXN93; TXN94; TXN95; TXN96; TXN97; TXN98; TXN99; TXN100; TXN101; TXN102; TXN103; TXN104; 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**Product Type** Tag anti

**Research Area** Tumour Cell biology immunology Signal transduction transcriptional regulatory factor

**Immunogen Species** Rabbit

**Clonality** Polyclonal

**React Species** Human,Mouse,Rat

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

**Theoretical molecular weight** 12kDa

**Cellular localization** The nucleus cytoplasmic Secretory protein

**Form** Liquid

**Concentration** 1mg/ml

**immunogen** KLH conjugated synthetic peptide derived from human Thioredoxin: 51-105/105

**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 d

**PubMed**

applications.

[PubMed](#)

The protein encoded by this gene acts as a homodimer and is involved in many redox reactions. This protein is active in the reversible S-nitrosylation of cysteines in certain proteins, which is part of the signaling pathway for intracellular nitric oxide. This protein is found in the cytoplasm. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Oct 2011]

**Function:**

Participates in various redox reactions through the reversible oxidation of its active center dithiol. Catalyzes dithiol-disulfide exchange reactions. Plays a role in the reversible S-nitrosylation of cysteine target proteins, and thereby contributes to the response to intracellular nitric oxide. Nitrosylates the active site of CASP3 in response to nitric oxide (NO), and thereby inhibits caspase-3 activity. Induces the DNA-binding activity in ionizing radiation (IR) cells through its oxidation/reduction status and stimulates transcriptional activity.

**Subunit:**

Homodimer; disulfide-linked. Interacts with TXNIP through the redox-active site. Interacts with CASP3. In case of infection, interacts with S.typhimurium protein slrP. Interacts with APEX1; this interaction stimulates the FOS/JUN AP-1 DNA-binding activity in a redox-dependent manner.

**Product Detail**

**Subcellular Location:**

Nucleus. Cytoplasm. Secreted. Note=Secreted by a leaderless secretory pathway. Predominantly in non irradiated cells. Radiation induces translocation of TRX from the cytoplasm to the nucleus.

**Similarity:**

Belongs to the thioredoxin family. Contains 1 thioredoxin domain.

**SWISS:**

P10599

**Gene ID:**

7295

**Database links:**

[Entrez Gene: 7295](#) Human

[Entrez Gene: 22166](#) Mouse

[Entrez Gene: 116484](#) Rat

[Omim: 187700](#) Human

[SwissProt: P10599](#) Human

[SwissProt: P10639](#) Mouse

[SwissProt: P11232](#) Rat

[Unigene: 435136](#) Human

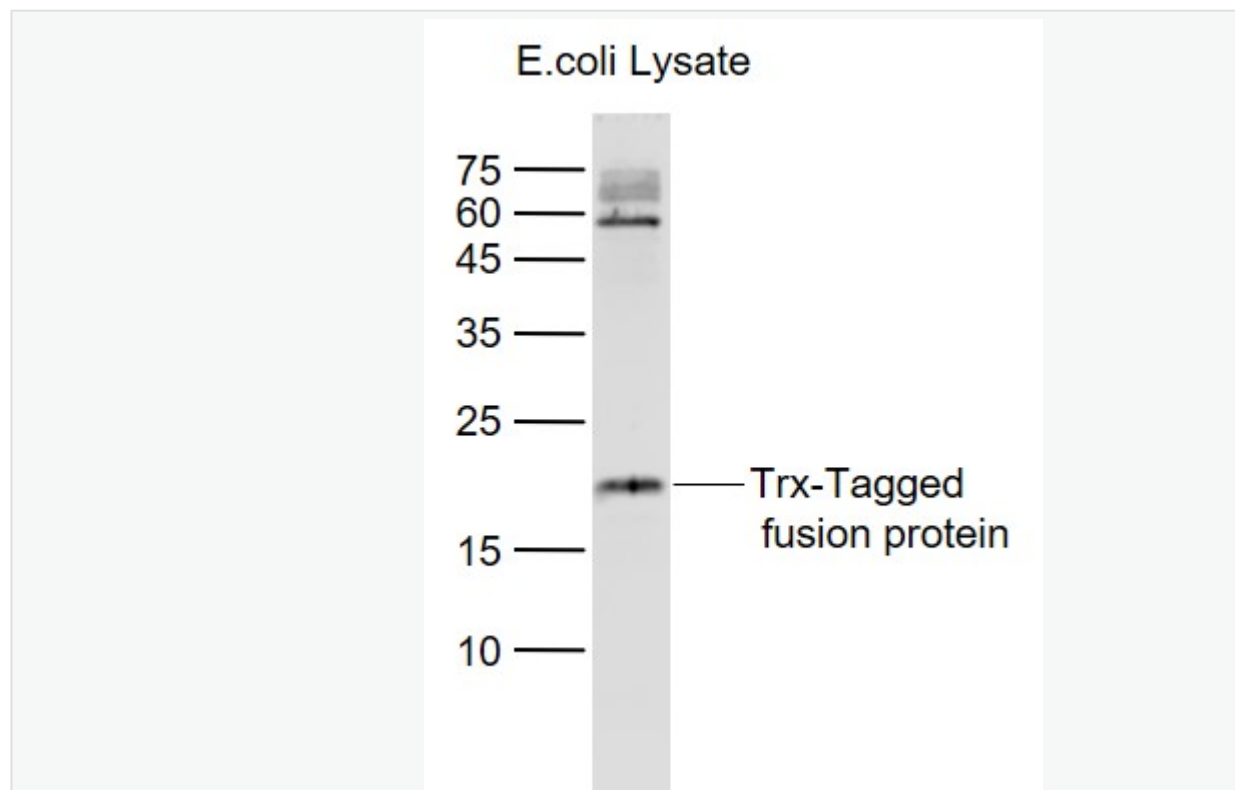
[Unigene: 260618](#) Mouse

[Unigene: 29777](#) Rat

硫氧还蛋白(Thioredoxin, Trx)是一类广泛存在于生物体内的多功能酸性蛋白,分子量约12kDa,是一种小分子含硒蛋白质,参与细胞的一系列生化反应,包括酶活性的调节、转录因子的调控等,是一种细胞内力量调节蛋白。

硫氧还蛋白的功能绝大多数是依赖于硫氧还蛋白还原靶蛋白中的二硫键。所有硫氧还蛋白的活性中心, Trp-Cys-Gly(Ala)-Pro-Cys, 活性中心有两个具有氧还活性的半胱氨酸残基。

**Product  
Picture**



Sample:

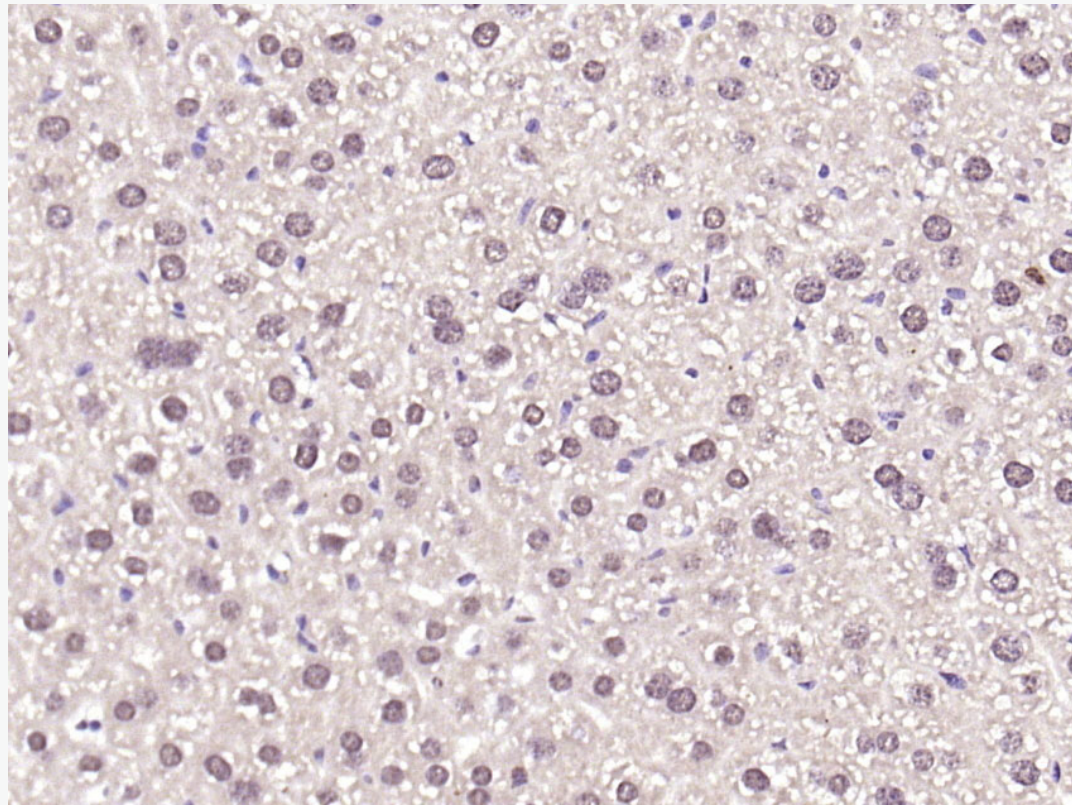
Lane 1: Trx-Tagged fusion protein (full length) Overexpression E.coli Lysate (Cat#: SL33018)

Primary: Anti-Thioredoxin/Trx (SL0458R) at 1/1000 dilution

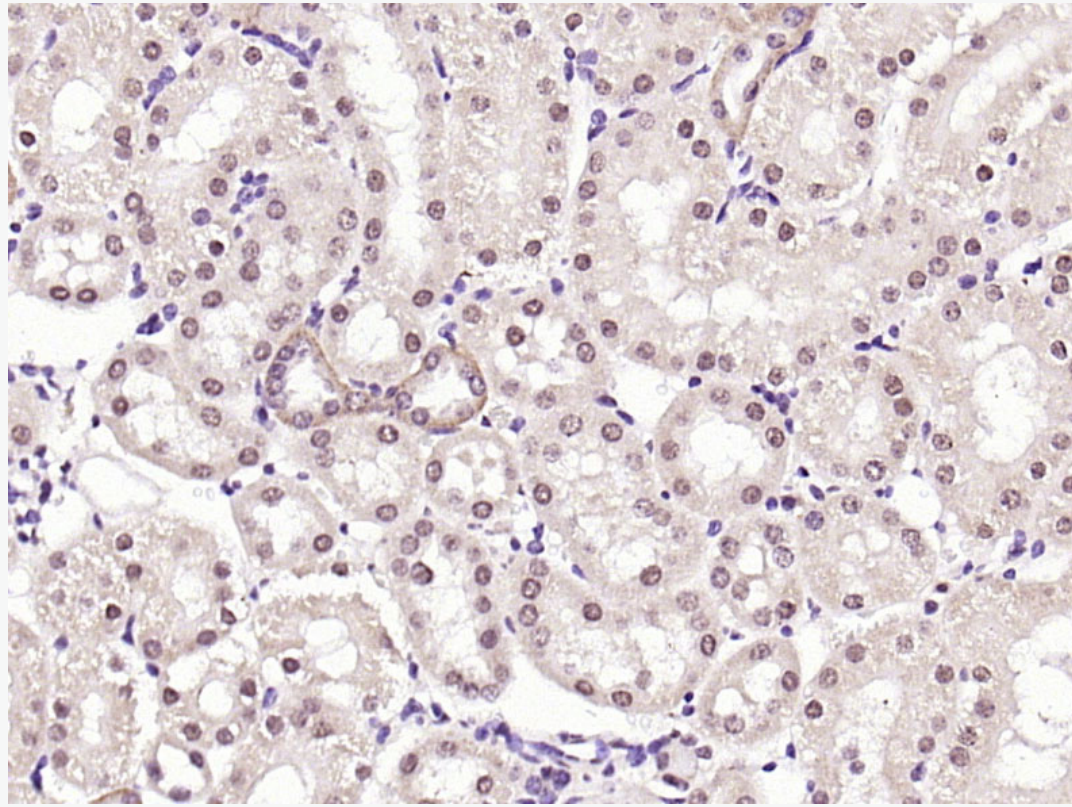
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 18 kD

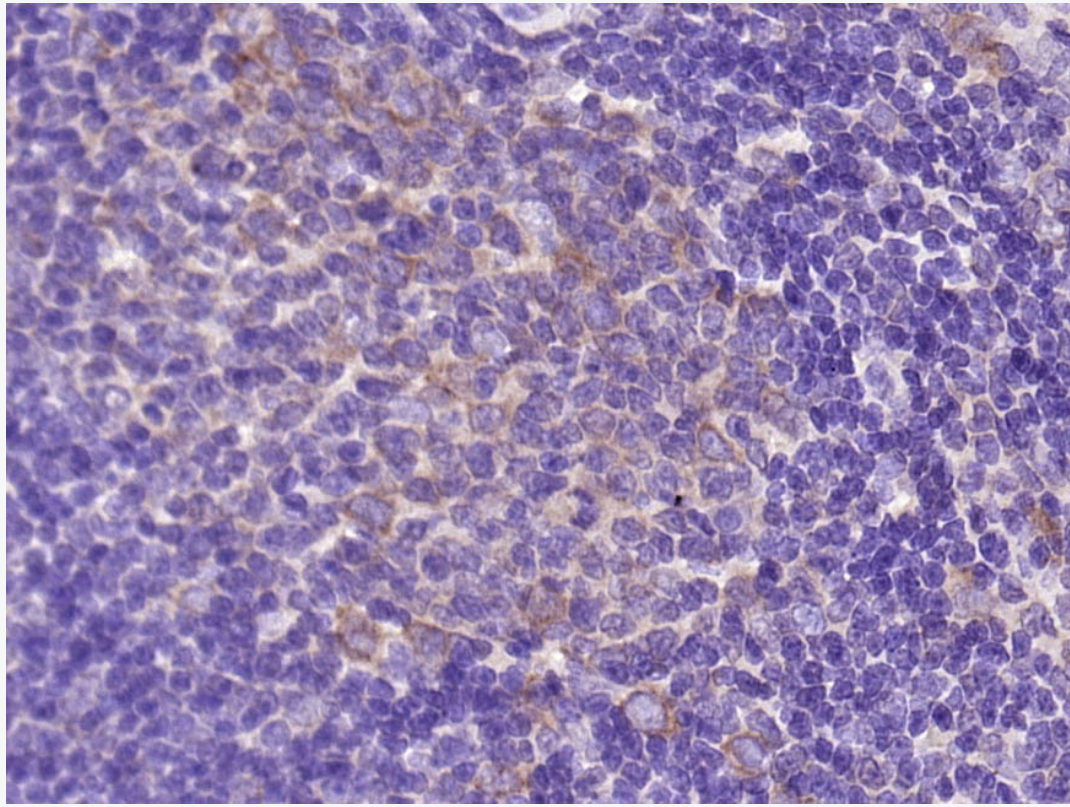
Observed band size: 18 kD



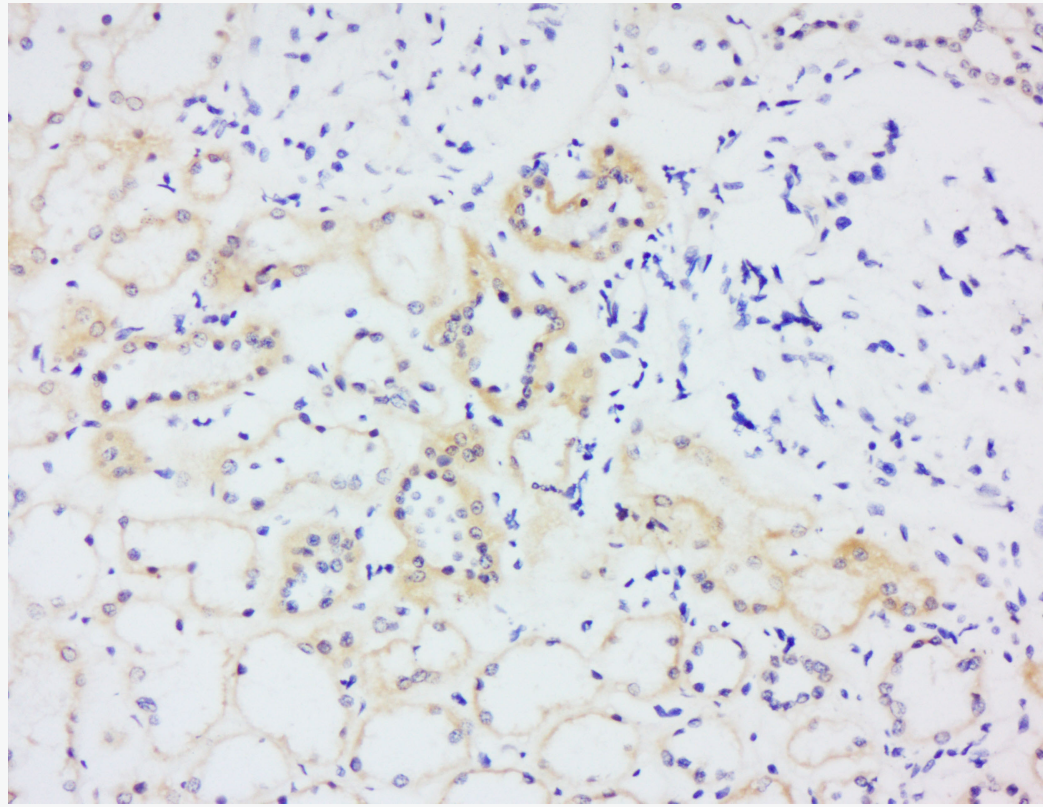
Paraformaldehyde-fixed, paraffin embedded (mouse liver); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 min; Block non-specific binding with bovine serum albumin (BSA) in Tris buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Thioredoxin) Polyclonal Antibody (SL0458R) at 1:200 overnight at 4°C, followed by operating according to SP Kit (sp-0023) instructions and DAB staining.



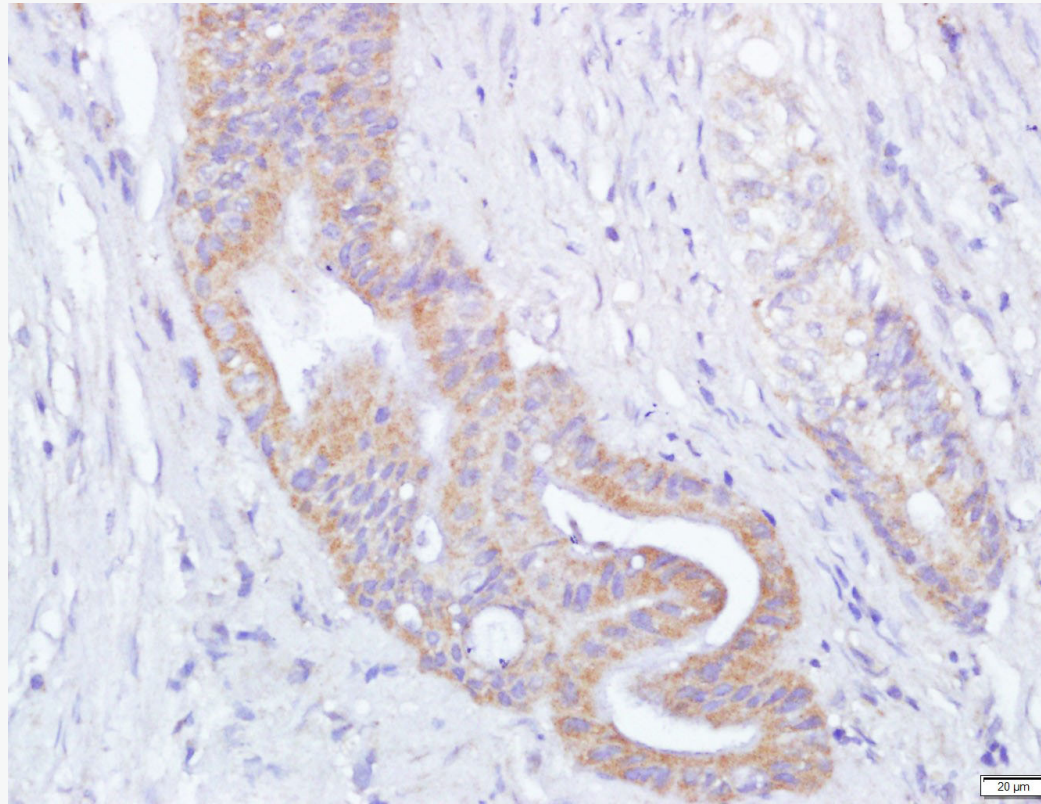
Paraformaldehyde-fixed, paraffin embedded (mouse kidney); Antigen retrieval by boiling in s buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 min buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Thioredoxin) Polyc Unconjugated (SL0458R) at 1:200 overnight at 4°C, followed by operating according to SP K (sp-0023) instructions and DAB staining.



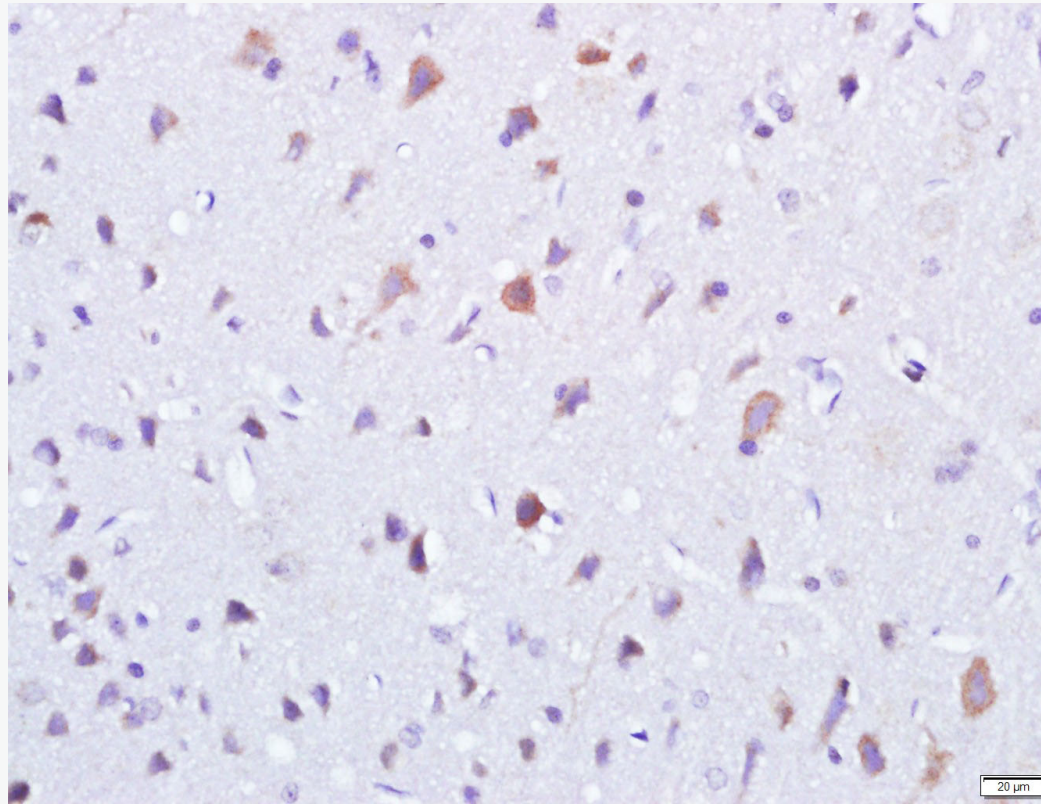
Paraformaldehyde-fixed, paraffin embedded (rat spleen); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Block non-specific binding by 3% BSA (normal goat serum) at 37°C for 30min; Antibody incubation with (Thio redoxin) Polyclonal Antibody (SL0458R) Unconjugated (SL0458R) at 1:200 overnight at 4°C, followed by operating according to SP Kit (sp-0023) instructions and DAB staining.



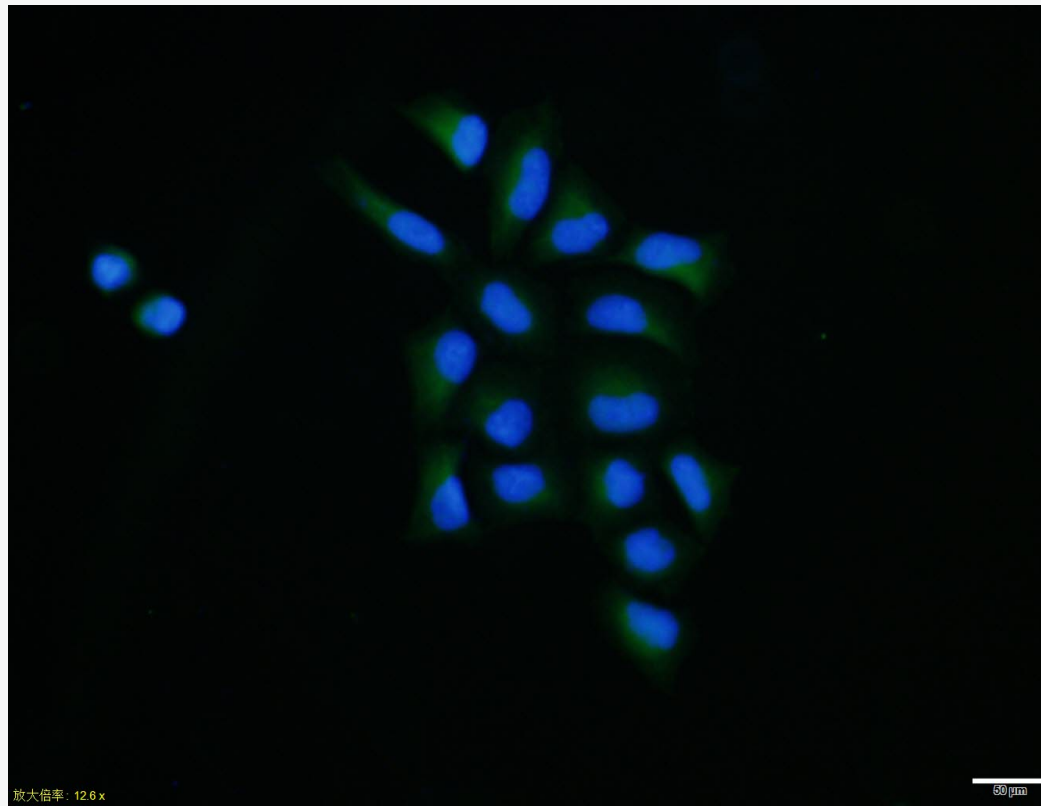
Paraformaldehyde-fixed, paraffin embedded (human kidney); Antigen retrieval by boiling in s buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 min buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Thioredoxin) Polyc Unconjugated (SL0458R) at 1:400 overnight at 4°C, followed by a conjugated secondary (sp- minutes and DAB staining.



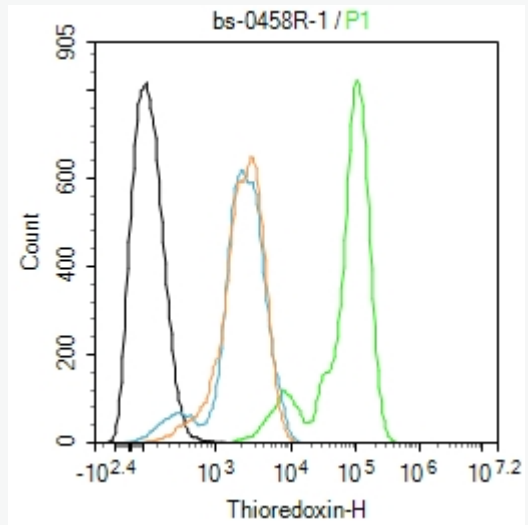
Paraformaldehyde-fixed, paraffin embedded (human cervical carcinoma); Antigen retrieval by sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 15 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (SL0458R) Polyclonal Antibody, Unconjugated (SL0458R) at 1:400 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes 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; Block non-specific binding by 3% normal goat serum at 37°C for 30min; Antibody incubation with (Thioredoxin) Polyclonal Antibody Unconjugated (SL0458R) at 1:400 overnight at 4°C, followed by a conjugated secondary antibody (sp-4) for 30 minutes and DAB staining.



Hela cell; 4% Paraformaldehyde-fixed; Triton X-100 at room temperature for 20 min; Blocking  
goat serum, C-0005) at 37°C for 20 min; Antibody incubation with (Thioredoxin) polyclonal A  
Unconjugated (SL0458R) 1:100, 90 minutes at 37°C; followed by a conjugated Goat Anti-Rab  
antibody at 37°C for 90 minutes, DAPI (blue, C02-04002) was used to stain the cell nuclei.



Blank control: SHSY5Y.

Primary Antibody (green line): Rabbit Anti-Thioredoxin antibody (SL0458R)

Dilution: 1ug/Test;

Secondary Antibody : Goat anti-rabbit IgG-FITC

Dilution: 0.5ug/Test.

#### Protocol

The cells were fixed with 4% PFA (10min at room temperature) and then permeabilized with 95% methanol for 20 min at -20°C. The cells were then incubated in 5% BSA to block non-specific interactions for 30 min at room temperature. Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 cells was performed.