



## Rabbit Anti-14-3-3 Alpha + Beta + Gamma + Delta + Epsilon antibody

SL0237R

**Product Name** 14-3-3 Alpha + Beta + Gamma + Delta + Epsilon

**Chinese Name** 14-3-3 蛋白/14-3-3  $\alpha/\beta/\gamma/\delta/\epsilon$  亚型抗体

**Alias** YWHAB; YWHAZ; 14-3-3 alpha/beta/Gamma/Delta/Epsilon; 14-3-3 alpha/beta; 14 3 3 protein beta/alpha; 14 3 3 protein zeta; KCIP 1; Protein 1054; Protein kinase C inhibitor protein protein delta; 14 3 3 protein gamma; 14 3 3 protein Epsilon; 1433Z\_HUMAN; 14-3-3 $\epsilon$ ; 14-3-3  $\delta$ ; 14-3-3  $\gamma$ ; 14-3-3  $\delta$ .

**Research Area** Apoptosis

**Immunogen Species** Rabbit

**Clonality** Polyclonal

**React Species** Human,Mouse,Rat(predicted:Sheep,Fruit Fly,Yeast)

**Applications** WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1 $\mu$ g /test. (Par sections need antigen repair)  
not yet tested in other applications.  
optimal dilutions/concentrations should be determined by the end user.

**Theoretical molecular weight** 27kDa

**Cellular localization** cytoplasmic

**Form** Liquid

**Concentration** 1mg/ml

**immunogen** KLH conjugated synthetic peptide derived from human 14-3-3: 174-245/245

**Lsotype** IgG

**Purification** affinity purified by Protein A

**Buffer Solution** Human,Mouse,Rat(predicted:Sheep,Fruit Fly,Yeast)1M TBS(pH7.4) with 1% BSA, Human,Mouse,Rat(predicted:Sheep,Fruit Fly,Yeast)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](#)

14-3-3 are activates tyrosine and tryptophan hydroxylases in the presence of Ca (2+)/calmodulin protein kinase II, and strongly activates protein kinase C. Is probably a multifunctional regulator signaling processes mediated by both kinases. Activates the ADP-ribosyltransferase (exoS) active bacterial origin. 14-3-3 proteins are localized in neurons, and are axonally transported to the nerve. They may be also present, at lower levels, in various other eukaryotic tissues. It belongs to the 14-3-3 family. This antibody is reactive with 14-3-3 Alpha, Beta, Gamma, Delta, Epsilon.

**Function:**

Adapter protein implicated in the regulation of a large spectrum of both general and specialized signaling pathways. Binds to a large number of partners, usually by recognition of a phosphoserine or phosphothreonine motif. Binding generally results in the modulation of the activity of the binding partner.

**Subunit:**

Interacts with CDK16 and BSPRY. Interacts with WEE1 (C-terminal). Interacts with SAMSN1. Interacts with MLF1 (phosphorylated form); the interaction retains it in the cytoplasm. Interacts with Thr-phosphorylated ITGB2. Interacts with BCL2L11. Homodimer. Heterodimerizes with YWHAB and hetero-dimerization is inhibited by phosphorylation on Ser-58. Interacts with FOXO4, NOX1 and ARHGEF2. Interacts with Pseudomonas aeruginosa exoS (unphosphorylated form). Interacts with BAX; the interaction occurs in the cytoplasm. Under stress conditions, MAPK8-mediated phosphorylation of BAX translocates BAX to mitochondria. Interacts with phosphorylated RAF1; the interaction is inhibited when YWHAB is phosphorylated on Thr-232. Interacts with TP53; the interaction enhances p53 transcriptional activity. Ser-58 phosphorylated form inhibits this interaction and p53 transcriptional activity. Interacts with ABL1 (phosphorylated form); the interaction retains ABL1 in the cytoplasm. Interacts with PKA-phosphorylated AANAT; the interaction modulates AANAT enzymatic activity by increasing affinity for arylalkylamine and acetyl-CoA and protecting the enzyme from dephosphorylation and proteasomal degradation. Interacts with YWHAB to prevent thiol-dependent inactivation. Interacts with AKT1; the interaction phosphorylates YWHAB and modulates dimerization. Interacts with GAB2 and TLK2.

**Product Detail**

**Subcellular Location:**

Cytoplasm. Melanosome. Note=Located to stage I to stage IV melanosomes.

**Post-translational modifications:**

The delta, brain-specific form differs from the zeta form in being phosphorylated. Phosphorylation on Ser-184 by MAPK8; promotes dissociation of BAX and translocation of BAX to mitochondria. Phosphorylation on Ser-58 by PKA; disrupts homodimerization and heterodimerization with YWHAB and TP53. This phosphorylation appears to be activated by sphingosine. Phosphorylation on Thr-232 inhibits the binding of RAF1.

**Similarity:**

Belongs to the 14-3-3 family.

**SWISS:**

P31946

**Gene ID:**

7529

**Database links:**

[Entrez Gene: 7529](#) Human

[Entrez Gene: 286863](#) Cow

[Entrez Gene: 54401](#) Mouse

[Entrez Gene: 56011](#) Rat

[Omim: 601289](#) Human

[SwissProt: P68250](#) Cow

[SwissProt: P31946](#) Human

[SwissProt: Q9CQV8](#) Mouse

[SwissProt: P35213](#) Rat

[Unigene: 643544](#) Human

[Unigene: 34319](#) Mouse

[Unigene: 485025](#) Mouse

[Unigene: 8653](#) Rat

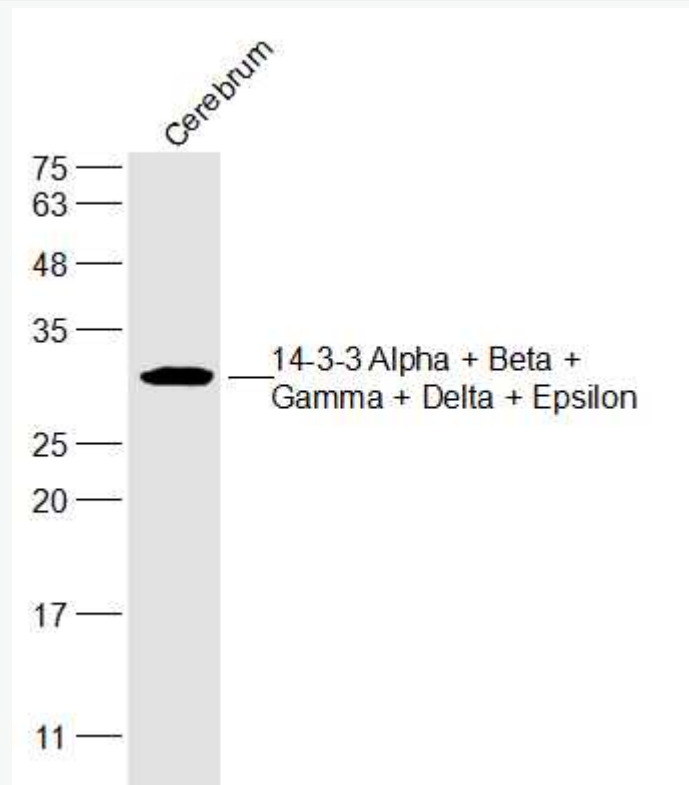
信号传导 (Signaling Intermediates)

14-3-3 蛋白是一个涉及调节 Apoptosis、促细胞分裂信号传导和细胞周期关卡的蛋白质家族成员。它是通过与丝氨酸残基磷酸化的蛋白质的结合介导的信号传导中的关键调节物。通过与 Bcl-2 和 Bad (凋亡因子)的结合, 14-3-3 蛋白由于将 Bad 隔离于胞液而防止了 Apoptosis。

14-3-3 蛋白是 14-3-3 家族成员。它广泛分布于哺乳动物、两栖类、Insect、Botany 和酵母菌的真核生物中。它是一种保守性多功能蛋白质。

目前已知至少有 16 个成员。此抗体识别分子量为 30-31kDa 的 14-3-3 蛋白  $\alpha\beta\gamma\delta\epsilon$  亚型。

**Product  
Picture**



Sample:

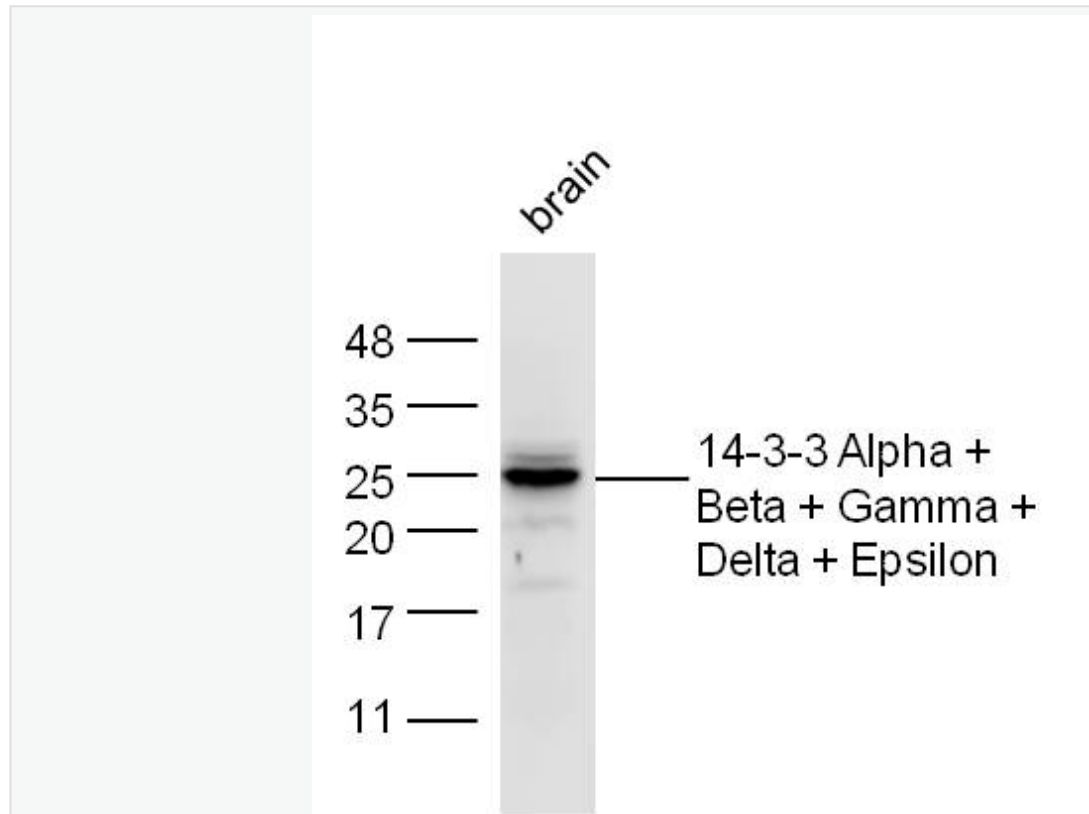
Cerebrum (Mouse) Lysate at 40 ug

Primary: Anti-14-3-3 Alpha + Beta + Gamma + Delta + Epsilon (SL0237R) at 1/300 dilution

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

Predicted band size: 27 kD

Observed band size: 27 kD



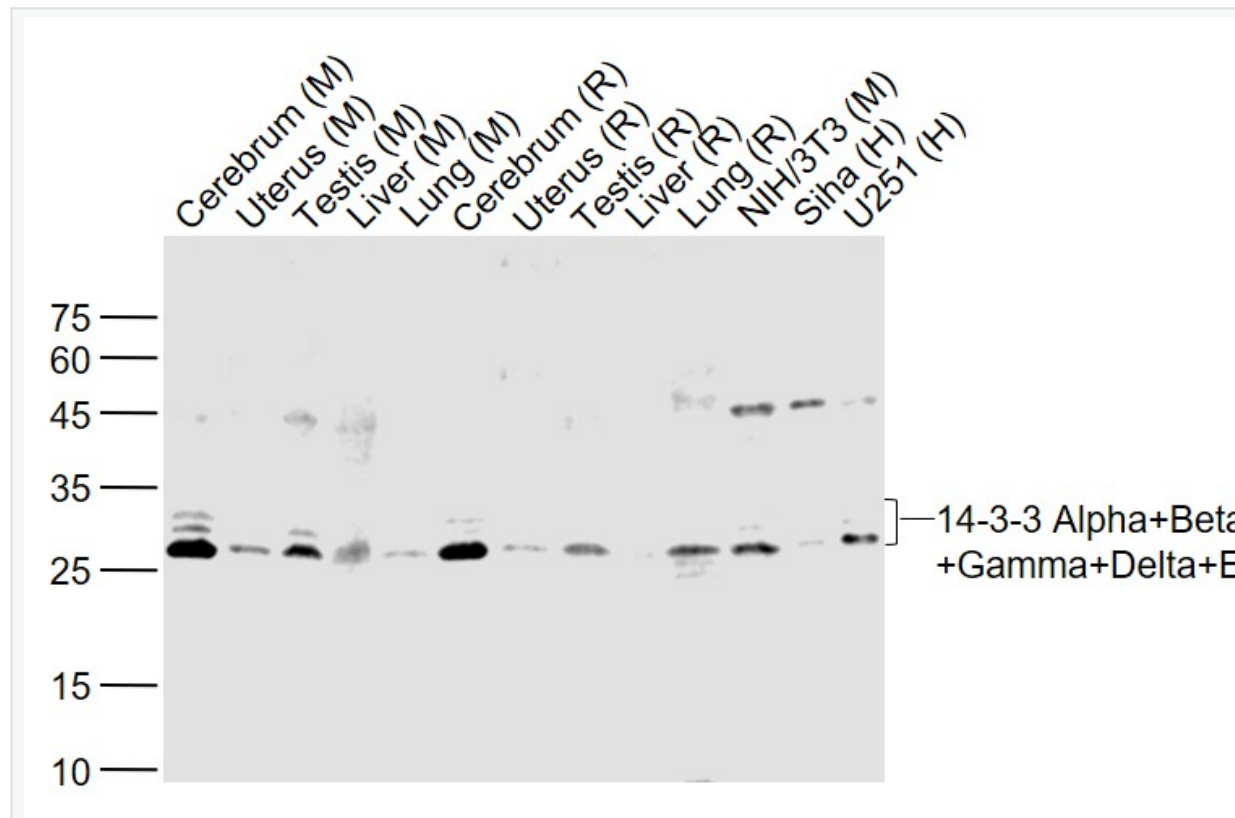
Sample:Brain Cell Lysate at 40 ug

Primary: Anti-14-3-3 Alpha + Beta + Gamma + Delta + Epsilon (SL0237R) at 1/300 dilution

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

Predicted band size: 27 kD

Observed band size: 27 kD



Sample:

Lane 1: Cerebrum (Mouse) Lysate at 40 ug

Lane 2: Uterus (Mouse) Lysate at 40 ug

Lane 3: Testis (Mouse) Lysate at 40 ug

Lane 4: Liver (Mouse) Lysate at 40 ug

Lane 5: Lung (Mouse) Lysate at 40 ug

Lane 6: Cerebrum (Rat) Lysate at 40 ug

Lane 7: Uterus (Rat) Lysate at 40 ug

Lane 8: Testis (Rat) Lysate at 40 ug

Lane 9: Liver (Rat) Lysate at 40 ug

Lane 10: Lung (Rat) Lysate at 40 ug

Lane 11: NIH/3T3 (Mouse) Cell Lysate at 30 ug

Lane 12: Siha (Human) Cell Lysate at 30 ug

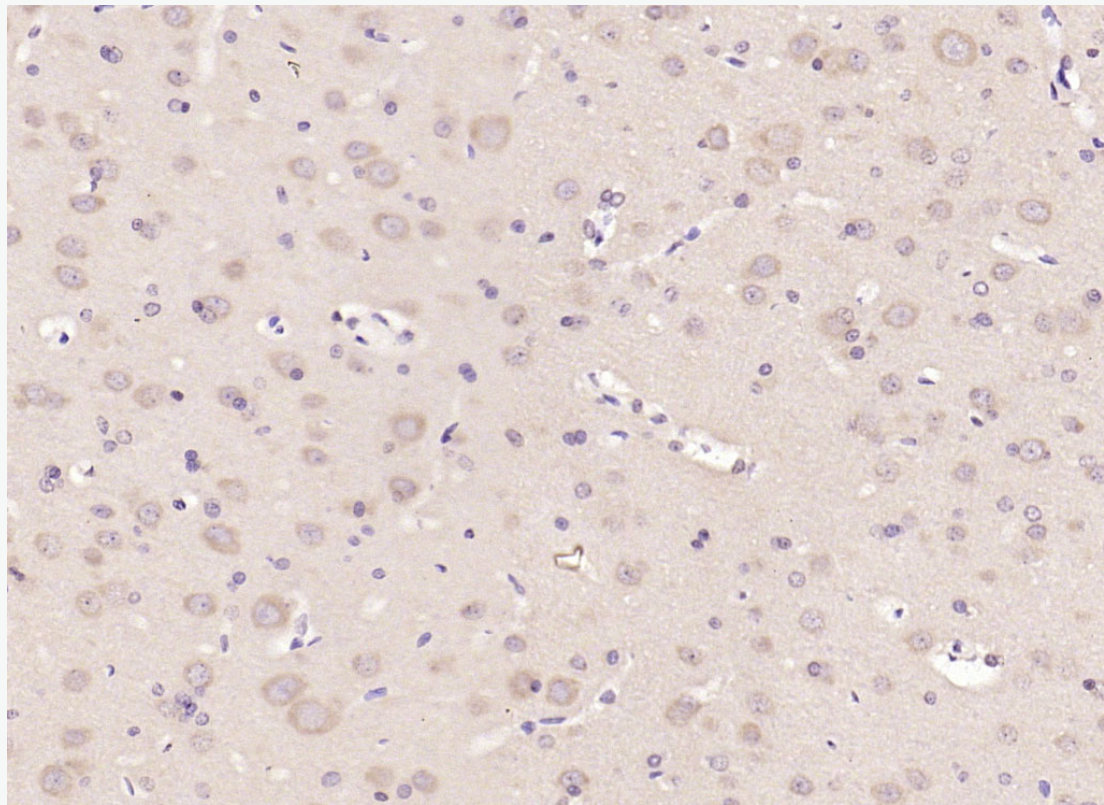
Lane 13: U251 (Human) Cell Lysate at 30 ug

Primary: Anti-14-3-3 Alpha+Beta+Gamma+Delta+Epsilon (SL0237R) at 1/1000 dilution

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

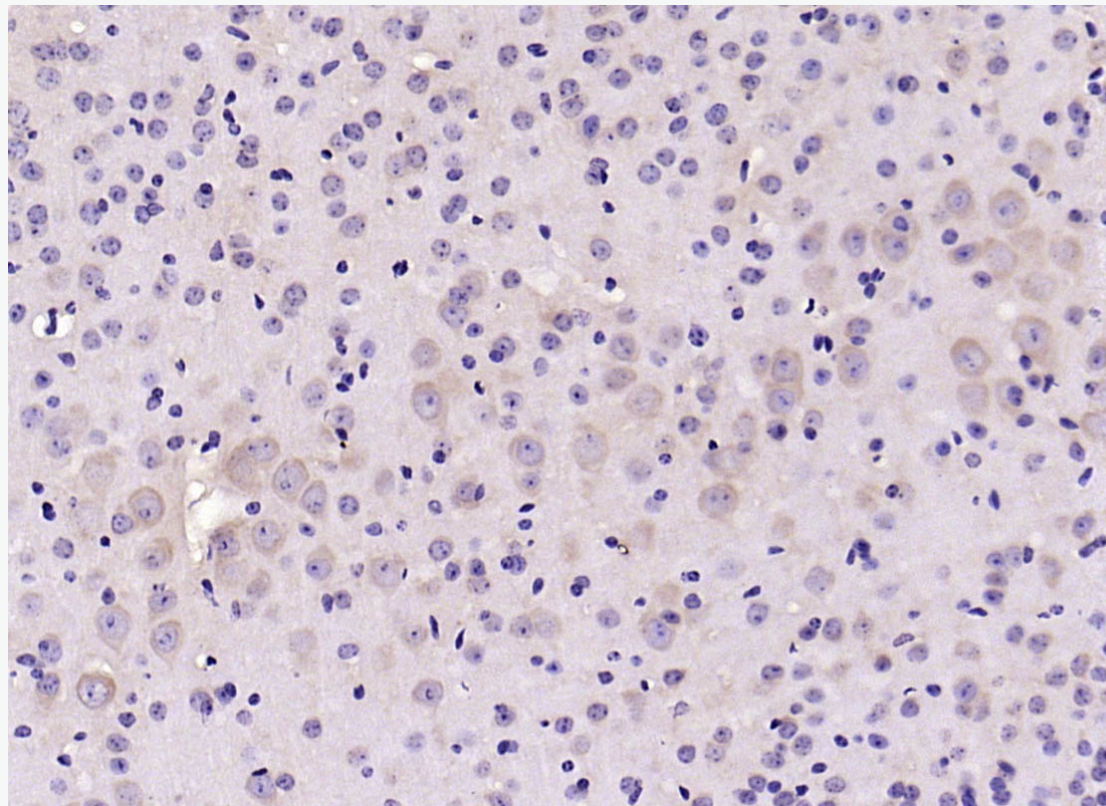
Predicted band size: 28 kD

Observed band size: 28 kD

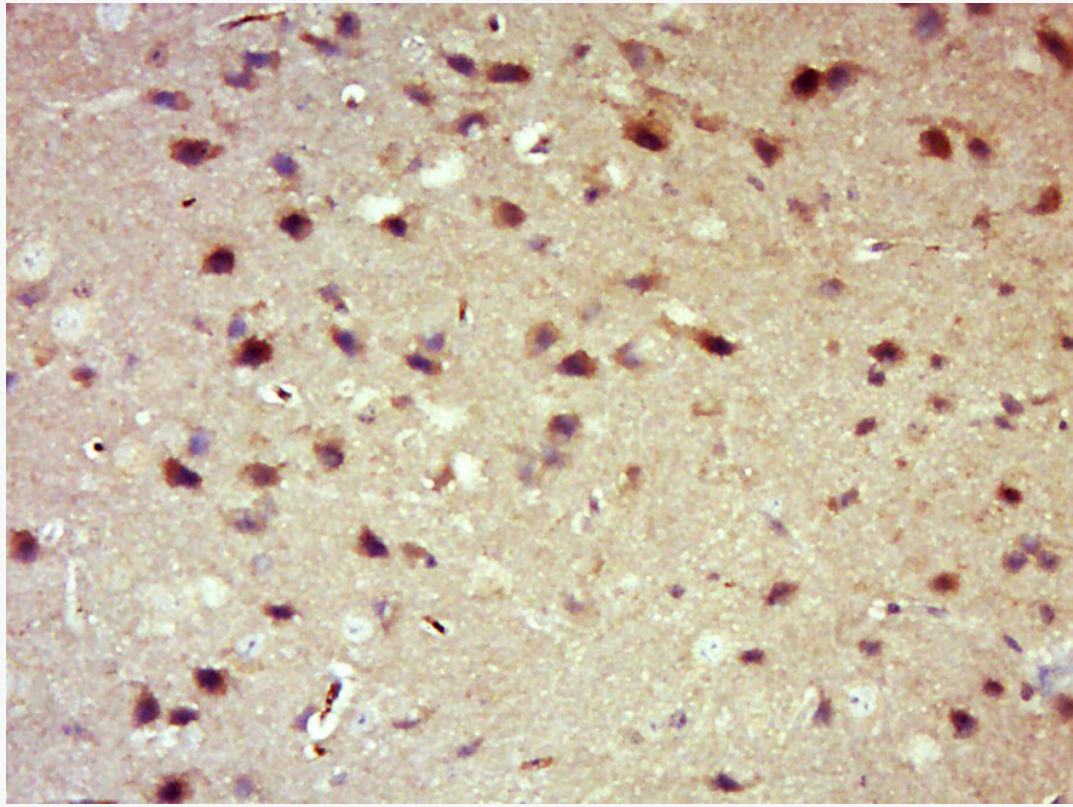


Paraformaldehyde-fixed, paraffin embedded (rat brain); Antigen retrieval by boiling in sodium

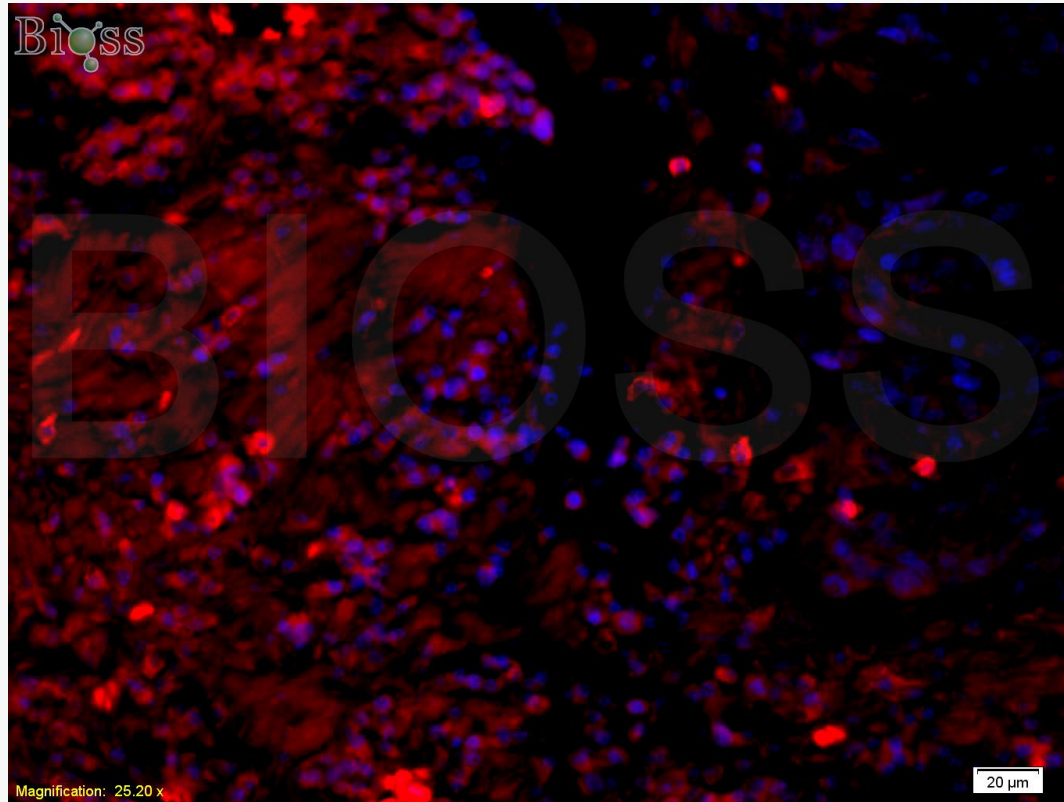
buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 min; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (14-3-3 Alpha + Gamma + Delta + Epsilon) Polyclonal Antibody, Unconjugated (SL1024R) at 1:200 overnight followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



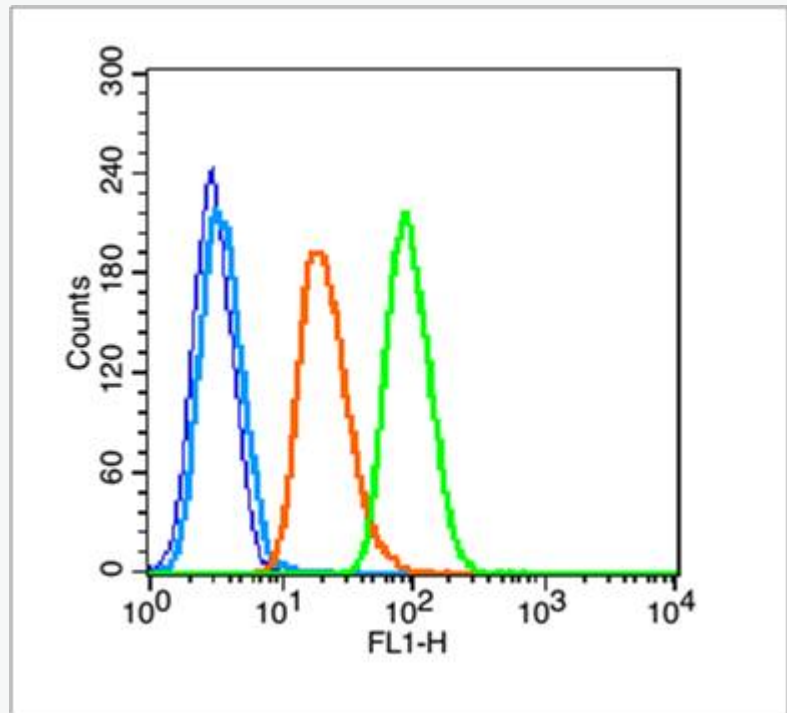
Paraformaldehyde-fixed, paraffin embedded (mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 min; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (14-3-3 Alpha + Gamma + Delta + Epsilon) Polyclonal Antibody, Unconjugated (SL1024R) at 1:200 overnight followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 min; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (14-3-3 Alpha + Gamma + Delta + Epsilon) Polyclonal Antibody, Unconjugated (SL0237R) at 1:500 overnight followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.



Tissue/cell: human rectal carcinoma;4% Paraformaldehyde-fixed and paraffin-embedded;  
Antigen retrieval: citrate buffer ( Human,Mouse,Rat(predicted:Sheep,Fruit Fly,Yeast)1M, pH  
Boiling bathing for 15min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;  
Incubation: Anti-14-3-3 Polyclonal Antibody, Unconjugated(SL0237R) 1:200, overnight at 4°C  
secondary antibody was Goat Anti-Rabbit IgG, PE conjugated(SL0295G-PE)used at 1:200 dilution  
minutes at 37°C. DAPI(5ug/ml,blue,C-0033) was used to stain the cell nuclei



Blank control (blue line): A549 (blue).

Primary Antibody (green line): Rabbit Anti-14-3-3 Alpha + Beta + Gamma + Delta + Epsilon (SL0237R)

Dilution: 1 $\mu$ g /10<sup>6</sup> cells;

Isotype Control Antibody (orange line): Rabbit IgG .

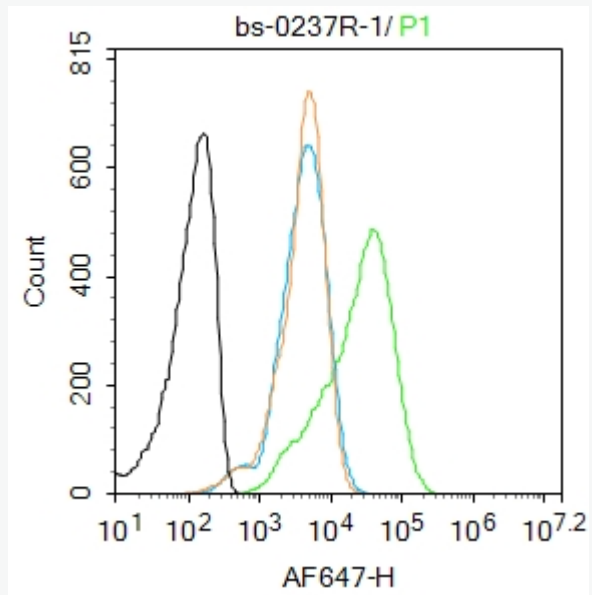
Secondary Antibody (white blue line): Goat anti-rabbit IgG-FITC

Dilution: 1 $\mu$ g /test.

#### Protocol

The cells were fixed with 70% ethanol (Overnight at 4°C) and then permeabilized with 90% ice methanol for 30 min on ice. Cells stained with Primary Antibody for 30 min at room temperature. Cells were then incubated in 1 X PBS/2%BSA/10% goat serum to block non-specific protein-p

interactions followed by the antibody for 15 min at room temperature. The secondary antibody  
 40 min at room temperature. Acquisition of 20,000 events was performed.



Blank control:A431.

Primary Antibody (green line): Rabbit Anti-14-3-3 Alpha + Beta + Gamma + Delta + Epsilon  
 (SL0237R)

Dilution: 1 $\mu$ g /10<sup>6</sup> cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody : Goat anti-rabbit IgG-AF647

Dilution: 1 $\mu$ g /test.

Protocol

The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 0  
 for 20 min at room temperature. The cells were then incubated in 5%BSA to block non-specific



protein-protein 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 events was performed.