

## Rabbit SIM2 Polyclonal Antibody | anti-SIM2 antibody

Anti-SIM2 Antibody Picoband

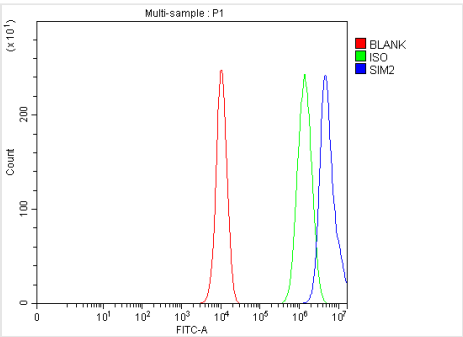
| CATALOG # | HOST   | REACTIVITY                | APPLICATIONS                                          |
|-----------|--------|---------------------------|-------------------------------------------------------|
| AAA127231 | Rabbit | Human, Monkey, Mouse, Rat | ELISA, Flow Cytometry, Functional Assay, Western Blot |

### PRODUCT SYNONYMS

SIM2; Polyclonal Antibody; Anti-SIM2 Antibody Picoband; Serine/threonine-protein kinase AtPK1/AtPK6; 70 kDa ribosomal protein S6 kinase 1 antibody; KS6B1\_HUMAN antibody; p70 alpha antibody; P70 beta 1 antibody; p70 ribosomal S6 kinase alpha antibody; p70 ribosomal S6 kinase beta 1 antibody; p70 S6 kinase alpha antibody; P70 S6 Kinase antibody; p70 S6 kinase alpha 1 antibody; p70 S6 kinase alpha 2 antibody; p70 S6K antibody; p70 S6K-alpha antibody; p70 S6KA antibody; p70(S6K) alpha antibody; p70(S6K)-alpha antibody; p70-alpha antibody; p70-S6K 1 antibody; p70-S6K antibody; P70S6K antibody; P70S6K1 antibody; p70S6Kb antibody; PS6K antibody; Ribosomal protein S6 kinase 70kDa polypeptide 1 antibody; Ribosomal protein S6 kinase beta 1 antibody; Ribosomal protein S6 kinase beta-1 antibody; Ribosomal protein S6 kinase I antibody; RPS6KB1 antibody; S6K antibody; S6K-beta-1 antibody; S6K1 antibody; Serine/threonine kinase 14 alpha antibody; Serine/threonine-protein kinase 14A antibody; STK14A antibody; anti-SIM2 antibody

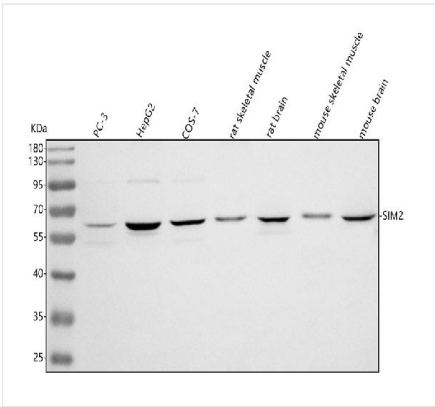
### PRODUCT SPECIFICATIONS

|                                                |                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                                           | Rabbit                                                                                                                                                                                                                                                                                                                                                         |
| Reactivity                                     | Human, Monkey, Mouse, Rat                                                                                                                                                                                                                                                                                                                                      |
| Clonality                                      | Polyclonal                                                                                                                                                                                                                                                                                                                                                     |
| Isotype                                        | IgG                                                                                                                                                                                                                                                                                                                                                            |
| Specificity                                    | Expressed in all tissues.                                                                                                                                                                                                                                                                                                                                      |
| Purity/Purification                            | Immunogen affinity purified.                                                                                                                                                                                                                                                                                                                                   |
| Form/Format                                    | Lyophilized. Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.                                                                                                                                                                                                                                                                                   |
| Applicable Applications for anti-SIM2 antibody | ELISA, FCM/FACS (Flow Cytometry), WB (Western Blot)                                                                                                                                                                                                                                                                                                            |
| Immunogen                                      | E coli-derived human SIM2 recombinant protein (Position: Y337-R609). Human SIM2 shares 85.8% amino acid (aa) sequence identity with mouse SIM2.                                                                                                                                                                                                                |
| Subcellular Localization                       | Cytoplasm, Nucleus                                                                                                                                                                                                                                                                                                                                             |
| Reconstitution                                 | Adding 0.2 ml of distilled water will yield a concentration of 500ug/ml.                                                                                                                                                                                                                                                                                       |
| Cross Reactivity                               | No cross reactivity with other proteins.                                                                                                                                                                                                                                                                                                                       |
| Protein Function                               | Downstream effector of TOR signaling pathway involved in osmotic stress response. Could be involved in the control of plant growth and development. Phosphorylates the ribosomal proteins P14, P16 and S6. Functions as a repressor of cell proliferation and required for maintenance of chromosome stability and ploidy levels through the RBR1-E2F pathway. |
| Preparation and Storage                        | At -20 degree C for one year from date of receipt. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for six months.Avoid repeated freezing and thawing.                                                                                                                                          |



FCM/FACS (Flow Cytometry)

Figure 2. Flow Cytometry analysis of PC-3 cells using anti-SIM2 antibody (AAA127231). Overlay histogram showing PC-3 cells stained with AAA127231 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-SIM2 Antibody (AAA127231, 1ug/1x10<sup>6</sup> cells) for 30 min at 20 degree C. DyLight488 conjugated goat anti-rabbit IgG was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



WB (Western Blot)

Figure 1. Western blot analysis of SIM2 using anti-SIM2 antibody (AAA127231). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel)/90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human PC-3 whole cell lysates, Lane 2: human HepG2 whole cell lysates, Lane 3: monkey COS-7 whole cell lysates, Lane 4: rat skeletal muscle tissue lysates, Lane 5: rat brain tissue lysates, Lane 6: mouse skeletal muscle tissue lysates, Lane 7: mouse brain tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-SIM2 antigen affinity purified polyclonal antibody (#AAA127231) at 0.5ug/mL overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for SIM2 at approximately 65 kDa. The expected band size for SIM2 is at 73 kDa.

ADDITIONAL INFORMATION

|                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for anti-SIM2 antibody | The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Product Categories/Family for anti-SIM2 antibody   | Primary Antibodies; Signal Transduction; Signaling Pathway; Small G Proteins                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| References                                         | 1. Chen, H., Chrast, R., Rossier, C., Gos, A., Antonarakis, S. E., Kudoh, J., Yamaki, A., Shindoh, N., Maeda, H., Minoshima, S., Shimizu, N. Single-minded and Down syndrome? (Letter) Nature Genet. 10: 9-10, 1995.2. Chrast, R., Scott, H. S., Madani, R., Huber, L., Wolfer, D. P., Prinz, M., Aguzzi, A., Lipp, H.-P., Antonarakis, S. E. Mice trisomic for a bacterial artificial chromosome with the single-minded 2 gene (Sim2) show phenotypes similar to some of those present in the partial trisomy 16 mouse models of Down syndrome. Hum. Molec. Genet. 9: 1853-1864, 2000.3. Dahmane, N., Charron, G., Lopes, C., Yaspo, M.-L., Maunoury, C., Decorte, L., Sinet, P.-M., Bloch, B., Delabar, J.-M. Down syndrome-critical region contains a gene homologous to Drosophila sim expressed during rat and human central nervous system development. Proc. Nat. Acad. Sci. 92: 9191-9195, 1995. |

NCBI AND UNIPROT INFORMATION

|                                  |                                                                |
|----------------------------------|----------------------------------------------------------------|
| NCBI GI #                        | 2851630                                                        |
| NCBI GeneID                      | 6493                                                           |
| UniProt Accession #              | Q14190; O60766; Q15470; Q15471; Q15472; Q15473; Q16532; Q2TBD8 |
| NCBI Official Full Name          | Single-minded homolog 2                                        |
| NCBI Official Synonym Full Names | single-minded family bHLH transcription factor 2               |
| NCBI Official Symbol             | SIM2                                                           |
| NCBI Official Synonym Symbols    | SIM; bHLHe15; HMC13F06; HMC29C01                               |

|                            |                                                                                               |
|----------------------------|-----------------------------------------------------------------------------------------------|
| NCBI Protein Information   | single-minded homolog 2; transcription factor SIM2; class E basic helix-loop-helix protein 15 |
| UniProt Protein Name       | Single-minded homolog 2                                                                       |
| UniProt Gene Name          | <b>SIM2</b>                                                                                   |
| UniProt Synonym Gene Names | BHLHE15; bHLHe15                                                                              |
| UniProt Entry Name         | SIM2_HUMAN                                                                                    |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/polyclonal/sim2-antibody-flow-cytometry-western-blot-elisa/127231>