

Rabbit Anti-SIM2 antibody

SL11951R

Product Name SIM2

Chinese Name 转录因子蛋白 SIM2 抗体

Alias bHLHe15; Class E basic helix loop helix protein 15; Class E basic helix-loop-helix protein 15; MGC119447; SIM 2; SIM; Sim2; SIM2_HUMAN; Single minded homolog 2 (Drosophila); Single minded homolog 2; Single-minded homolog 2; Transcription factor SIM2.

Research Area Tumour Cell biology Signal transduction transcriptional regulatory factor Epigenetics

Immunogen Species Rabbit

Clonality Polyclonal

React Species (predicted: Human, Mouse, Rat, Dog, Pig, Cow, Horse, Sheep,)

IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000
(Paraffin sections need antigen repair)

Applications not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight 73kDa

Cellular localization The nucleus

Form Liquid

Concentration 1mg/ml

immunogen KLH conjugated synthetic peptide derived from human SIM2: 321-430/667

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](#)

The Per-Arnt-Sim (PAS) domain was identified as a 270 amino acid motif that mediates associations between various PAS family transcription factors. Several PAS domain family members have been identified including AhR, Arnt 1, and single-minded proteins (SIM1 and SIM2). The aromatic (aryl) hydrocarbon receptor, AhR, is a ligand dependent transcription factor that interacts with specific DNA sequences termed xenobiotic responsive elements (XREs) to activate several genes including CYP1A1, glutathione S-transferase Ya subunit and DT-diaphorase. The Ah receptor nuclear translocator protein 1 (Arnt 1) is required for ligand-dependent nuclear translocation of the Ah receptor and is also necessary for Ah receptor binding to the XRE element. Both SIM1 and SIM2 inhibit AhR/Arnt dimerization, thus inhibiting transcriptional activation. The SIM genes are thought to be involved in the directing and regionalization of tissues during development and the SIM2 gene, which is located on chromosome 21, is a candidate for the gene responsible for Down syndrome.

Function:

Transcription factor that may be a master gene of CNS development in cooperation with Arnt. It may have pleiotropic effects in the tissues expressed during development.

Subunit:

Efficient DNA binding requires dimerization with another bHLH protein. Heterodimer of SIM2 and ARNT.

**Product
Detail**

Subcellular Location:

Nucleus.

Similarity:

Contains 1 basic helix-loop-helix (bHLH) domain.
Contains 1 PAC (PAS-associated C-terminal) domain.
Contains 2 PAS (PER-ARNT-SIM) domains.
Contains 1 Single-minded C-terminal domain.

SWISS:

Q14190

Gene ID:

6493

Database links:

[Entrez Gene: 6493](#) Human

[Omim: 600892](#) Human

[SwissProt: Q14190](#) Human

[Unigene: 146186](#) Human



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