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Rabbit Anti-SIM1/Cy5 Conjugated antibody

SL11585R-Cy5

Product Name	Anti-SIM1/Cy5
Chinese Name	Cy5 标记的转录因子蛋白 SIM1 抗体
Alias	bHLHe14; Class E basic helix-loop-helix protein 14; SIM1; SIM1_HUMAN; Single minded homolog 1; Single-minded homolog 1.
Research Area	Cell biology Neurobiology Signal transduction transcriptional regulatory factor
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	(predicted:Human,Mouse,Rat,Chicken,Dog,Pig,Cow,Horse,Rabbit,Zebrafish)
Applications	ICC/IF=1:50-200,IF=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight	85kDa
Form	Lyophilized or Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human SIM1 (2-80aa)
Lsotype	IgG
Purification	affinity purified by Protein A
Storage Buffer	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Product Detail	**background:** 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:
Transcriptional factor that may have pleiotropic effects during embryogenesis and in the adult.

Subunit:
Efficient DNA binding requires dimerization with another bHLH protein. Heterodimer of SIM1 and ARNT.

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.

Database links:

Entrez Gene: 6492 Human

Entrez Gene: 20464 Mouse

Entrez Gene: 309888 Rat

Omim: 603128 Human

SwissProt: P81133 Human

SwissProt: Q61045 Mouse

Unigene: 520293 Human

Unigene: 4774 Mouse

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Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.