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# SIM2 Rabbit pAb

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Catalog # AP54683

## Product Information

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| **Application** | IHC-P, IHC-F, IF |
| **Primary Accession** | Q14190 |
| **Predicted** | Rat, Pig, Dog, Human, Mouse, Horse, Sheep |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 73219 |
| **Physical State** | Liquid |
| **Immunogen** | KLH conjugated synthetic peptide derived from human SIM2 |
| **Epitope Specificity** | 321-430/667 |
| **Isotype** | IgG |
| **Purity** | affinity purified by Protein A |
| **Buffer** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. |
| **SUBCELLULAR LOCATION** | Nucleus. |
| **Important Note** | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |
| **Background Descriptions** | 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. |

## Additional Information

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| **Gene ID** | 6493 |
| **Other Names** | Single-minded homolog 2, Class E basic helix-loop-helix protein 15, bHLHe15, SIM2, BHLHE15 |
| **Dilution** | IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000 |

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| **Storage** | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |

## Protein Information

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| **Name** | SIM2 |
| **Synonyms** | BHLHE15 |
| **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. |
| **Cellular Location** | Nucleus {ECO:0000255\|PROSITE-ProRule:PRU00632, ECO:0000255\|PROSITE-ProRule:PRU00981, ECO:0000269\|PubMed:14697214} |

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Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.