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SIM1 Rabbit pAb

Catalog # AP98450

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	P81133
Other Accession	P81133
Predicted	Rat, Pig, Human, Mouse, Rabbit, Zebrafish, Chicken, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	85515
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human SIM1
Epitope Specificity	2-80/766
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
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.
SUBUNIT	Efficient DNA binding requires dimerization with another bHLH protein. Heterodimer of SIM1 and ARNT.
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

Gene ID	6492
Other Names	bHLHe14; mSIM1; SIM1_HUMAN; SIM1; Class E basic helix-loop-helix protein 14 (bHLHe14); SIM1_MOUSE; SIM bHLH transcription factor 1; single-minded (Drosophila) homolog 1; single-minded homolog 1 (Drosophila);

	single-minded family bHLH transcription factor 1
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000
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

Name	SIM1
Synonyms	BHLHE14
Function	Transcriptional factor that may have pleiotropic effects during embryogenesis and in the adult.
Cellular Location	Nucleus {ECO:0000255|PROSITE-ProRule:PRU00632, ECO:0000255|PROSITE-ProRule:PRU00981}

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