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# HAND1 Rabbit pAb

Catalog # AP96747

## Product Information

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| **Application** | WB |
| **Primary Accession** | O96004 |
| **Other Accession** | O96004 |
| **Reactivity** | Human, Mouse |
| **Predicted** | Rat, Pig, Rabbit, Chicken, Dog, Sheep |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 23627 |
| **Physical State** | Liquid |
| **Immunogen** | KLH conjugated synthetic peptide derived from human HAND1 |
| **Epitope Specificity** | 101-200/215 |
| **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 bHLH (basic helix-loop-helix) domain. |
| **SUBUNIT** | Efficient DNA binding requires dimerization with another bHLH protein. Forms homodimers and heterodimers with TCF3 gene products E12 and E47, HAND2 and HEY1, HEY2 and HEYL (hairy-related transcription factors). Interacts with MDFIC (By similarity). |
| **Post-translational modifications** | Phosphorylation by PLK4 disrupts the interaction with MDFIC and leads to tranlocation into the nucleoplasm, allowing dimerization and transcription factor activity (By similarity). |
| **Important Note** | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |
| **Background Descriptions** | Transcription factor that plays an essential role in both trophoblast-giant cells differentiation and in cardiac morphogenesis. In the adult, could be required for ongoing expression of cardiac-specific genes.dHAND (for deciduum, heart, autonomic nervous system and neural crest derivatives; also designated HAND2) and eHAND (also designated HAND1, HXT or Thing1) are members of a subclass of basic-helix-loop-helix transcription factors that are involved in cardiac development. dHAND and eHAND are expressed in the heart after cardiac looping, and they participate in left-right cardiac asymmetry. dHAND is expressed predominantly on the right side of the looped heart tube and in the pulmonary ventricle, where it activates transcription of various genes, including Ufd1 (for ubiquitin fusion degradation) and Cdc45. In addition, dHAND is expressed in sympathetic neurons and chromafin cells throughout embryonic and fetal development and mediates neural crest development. eHAND expression is primarily observed on the left side and in the systemic ventricle, suggesting that these proteins are involved in the development of segments of the heart tube, which give rise to specific heart chambers during cardiogenesis. |

## Additional Information

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| **Gene ID** | 9421 |
| **Other Names** | Hxt; Thing1; bHLHa27; eHand; HAND1_HUMAN; HAND1; Class A basic helix-loop-helix protein 27 (bHLHa27); Extraembryonic tissues, heart, autonomic nervous system and neural crest derivatives-expressed protein 1 (eHAND); HAND1_RABIT; HAND1_RAT; HAND1_SHEEP; heart and neural crest derivatives expressed 1 |
| **Dilution** | WB=1:500-2000 |
| **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** | HAND1 |
| **Synonyms** | BHLHA27, EHAND |
| **Function** | Transcription factor that plays an essential role in both trophoblast giant cell differentiation and in cardiac morphogenesis (By similarity). Binds the DNA sequence 5'-NRTCTG-3' (non-canonical E-box) (By similarity). Acts as a transcriptional repressor of SOX15 (By similarity). In the adult, could be required for ongoing expression of cardiac-specific genes (PubMed:9931445). |
| **Cellular Location** | Nucleus, nucleoplasm. Nucleus, nucleolus. Note=Interaction with MDFIC sequesters it into the nucleolus, preventing the transcription factor activity Phosphorylation by PLK4 disrupts the interaction with MDFIC and releases it from the nucleolus, leading to transcription factor activity (By similarity). |
| **Tissue Location** | Heart. |

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