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# NANOG-TAT

Catalog # PVGS1210

## Product Information

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| **Primary Accession** | Q9H9S0 |
| **Species** | Human |
| **Sequence** | Met1-Val305 (Lys82Asn), expressed with additional C-terminal sequence (GGYGRKKRRQRRR) |
| **Purity** | > 95% as analyzed by SDS-PAGE<br>> 95% as analyzed by HPLC |
| **Endotoxin Level** | |
| **Expression System** | E. coli |
| **Formulation** | Supplied as a sterile filtered solution in 10 mM PB, 300 mM NaCl, pH 7.4. |
| **Storage & Stability** | Upon receiving, this product remains stable for up to 6 months at -20°C or below and 1-2 weeks at 4°C. For long term storage, aliquot and store at -70°C or below. Avoid repeated freeze-thaw cycles. |

## Additional Information

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| **Gene ID** | 79923 |
| **Other Names** | Homeobox protein NANOG, Homeobox transcription factor Nanog, hNanog, NANOG |
| **Target Background** | NANOG is a transcription factor involved with self-renewal of inner cell mass and embryonic stem (ES) cells by functioning in concert with other factors such as POU5F1 (Oct-4) and SOX2. Nanog imposes pluripotency on ES cells and prevents their differentiation towards extraembryonic endoderm and trophectoderm lineages, and blocks bone morphogenetic protein-induced mesoderm differentiation of ES cells by physically interacting with SMAD1 and interfering with the recruitment of coactivators to the active SMAD transcriptional complexes. |

## Protein Information

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| **Name** | NANOG |
| **Function** | Transcription regulator involved in inner cell mass and embryonic stem (ES) cells proliferation and self-renewal. Imposes pluripotency on ES cells and prevents their differentiation towards extraembryonic endoderm and trophectoderm lineages. Blocks bone morphogenetic protein-induced mesoderm differentiation of ES cells by physically interacting with SMAD1 and |

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| | interfering with the recruitment of coactivators to the active SMAD transcriptional complexes. Acts as a transcriptional activator or repressor. Binds optimally to the DNA consensus sequence 5'-TAAT[GT][GT]-3' or 5'-[CG][GA][CG]C[GC]ATTAN[GC]- 3'. Binds to the POU5F1/OCT4 promoter (PubMed:25825768). Able to autorepress its expression in differentiating (ES) cells: binds to its own promoter following interaction with ZNF281/ZFP281, leading to recruitment of the NuRD complex and subsequent repression of expression. When overexpressed, promotes cells to enter into S phase and proliferation. |
| **Cellular Location** | Nucleus {ECO:0000255\|PROSITE-ProRule:PRU00108, ECO:0000269\|PubMed:15983365} |
| **Tissue Location** | Expressed in testicular carcinoma and derived germ cell tumors (at protein level). Expressed in fetal gonads, ovary and testis. Also expressed in ovary teratocarcinoma cell line and testicular embryonic carcinoma. Not expressed in many somatic organs and oocytes. |

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