Nanog-TAT, human recombinant

CATALOG #: 7177-10 10 µg
7177-50 50 µg

ALTERNATE NAMES: Homeobox transcription factor Nanog

SOURCE: E. Coli

PURITY: ≥ 98% by SDS-PAGE gel and HPLC analyses

MOL. WEIGHT: 36.2 kDa

ENDOTOXIN LEVEL: < 0.1 ng/µg of protein (<1EU/µg).

FORM: Lyophilized

FORMULATION: Sterile filtered through a 0.2 micron filter. Lyophilized from 5 mM Sodium Citrate pH 3.0 and 100 mM NaCl.

STORAGE CONDITIONS: Store at -20°C. After reconstitution, aliquot and store at -20°C to -80°C. Avoid repeated freezing and thawing cycles.

RECONSTITUTION:
Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. This solution can be stored at 2-8°C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

DESCRIPTION:
Nanog is a regulatory protein that is associated with undifferentiated pluripotent cells. The expression of Nanog, which is suppressed in all adult tissues, is restricted to embryonic stem cells and to certain pluripotent cancer cells. Decreased expression of Nanog is strongly correlated with cell differentiation. Nanog, most likely, acts as an intracellular regulator, which helps maintain pluripotency and self-renewal via a STAT3 independent pathway. The introduction of Nanog, along with Sox2, Oct4, Lin28, into primary human fibroblasts was sufficient to confer a pluripotent state upon the fibroblast genome. The reprogrammed cells thus obtained resemble ESC in morphology and gene expression. Protein transduction using TAT fusion proteins represents an alternative methodology for introducing transcription factors into primary as well as transformed cells. Recombinant human Nanog-TAT is a 36.2 kDa protein, which is synthesized as a 304 amino acid polypeptide plus a 13- residue C-terminal TAT peptide.

AMINO ACID SEQUENCE:
MSVDPACPQS LPCFEASDCK ESSPMPVICG PEENYPSLQM SSAEMPHTET
VSPLPSSMDL LIQDSPDSST SPKGKQPTSA ENSVAKKEDK VPVKKQKTRT
VFSSTQLCVL NDRFQRQKYL SLQQMQELSN ILNLSYKQVK TWFQNQRMKS
KRWQKNNWPK NSNGVTQKAS APTYPSLYSS YHQGCLVNPT GNLPMWSNQT
WNNSTWSNQT QNIQSWSNHS WNTQTWCTQS WNNQAWNSPF YNCGEESLQS
CMQFQPNSPA SDLEAALEAA GEGLNVIQQT TRYFSTPQTM DLFLNYSMNM
QPEDVGGYGR KKRRQRRR

RELATED PRODUCTS:

- Nanog, human recombinant **(Cat # 7176-10, -50)**
- Nanog Antibody **(Cat # 3165-100)**

FOR RESEARCH USE ONLY! Not to be used in humans.