

21-6010: Human Recombinant OCT4 protein His

Application : ELISA, WB
Reactivity : Human
Gene ID : NP_002692.2
Uniprot ID : Q01860
Immunogen Information : OCT4 (1a.a - 360 a.a.) recombinant protein with an N-terminal His-PTD-NLS tag.

Description

Molecular weight: 48 kDa

Expression system: *E. coli*

Recombinant, 6xHis tag

OCT4 (Octamer binding transcription factor 4) is a key regulator of self-renewal in embryonic stem cells. It is a homeodomain transcription factor belonging to POU family. OCT4 is frequently used as a marker for undifferentiated cells. This factor is one of the four original Yamanaka Factors and has been shown to be essential for pluripotency of embryonic stem cells. Along with SOX2, KLF4 and c-Myc, it can reprogram somatic or differentiated cells into induced pluripotent stem cells (iPSCs).

The recombinant protein is tagged with nuclear localization signal (NLS), a protein translocation domain (PTD, a poly arginine cell-penetrating peptide) and 6xHis at N-terminal region of the protein. The PTD will allow the entry of transcription factors through the plasma membrane and the NLS will allow entry of the proteins in to the nucleus to exert their biological actions.

Product Info

Amount : 50 µg / 100 µg
Purification : Approximately 90%
Content : 100 µg purified protein at a concentration of 0.5 mg/ml
Storage condition : -20 Degree C. Stable for one year. Avoid repeated freeze-thaw
Amino Acid : MAGHLASDFAFSPPPGGGGDGPGGPEPGWVDPRTWLSFQGPPGGPGIGPGVGPSEVWGIPP
 CPPPYEFCGGMAYCGPQVGVLVPQGGLETSQPEGEAGVGVESNSDGASPEPCTTPGAVKLEK
 EKLEQNPEESQDIKALQKELEQFAKLLKQKRITLGYTQADVGLTLGLVLFKGKVSQTTICRFEALQLSF
 KNMCKLRPLLQKWVEEADNNENLQEICKAETLVQARKRKRTSIENRVRGNLENLFLQCPKPTLQQI
 SHIAQQLGLEKDVRVWFVFCNRRQKGRSSDYAQREDFEAAGSPFSGGPVSFPLAPGPHFGTPG
 YGSPHFTALYSSVPFPEGEAFPPVSVTTLGSPMHSNESGGGGSPGRRRRRRRRRRRR

Application Note

Cell culture, WB, ELISA, EMSA

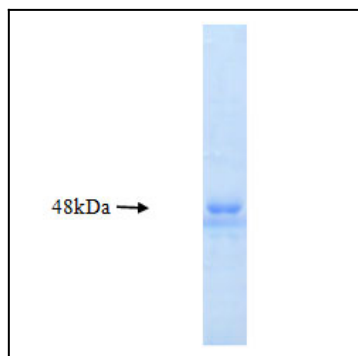


Fig 1. SDS-PAGE analysis of purified recombinant transcription factor, OCT4.

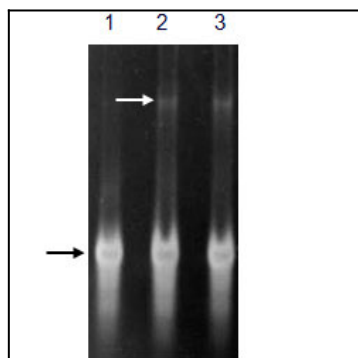


Fig 2. Binding activity of OCT4 with its DNA binding sequence (primer) was analyzed by EMSA using 100 ng of primer and different concentrations of OCT4. Lane 1: Primer alone; lane 2: Primer with 1 μ g of OCT4; lane 3: Primer with 3 μ g of OCT4.