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POU5F1 Human, PolyR

Catalog #:PRPS-098

For research use only.

Description:POU5F1 Human Recombinant produced in E.Coli is a single, non-glycosylated, Polypeptide chain containing 360 amino acids and having a molecular mass of 38.6kDa.The POU5F1 is fused to a C-terminal poly-arginine tag and purified by proprietary chromatographic techniques.

Synonyms:POU domain class 5 transcription factor 1, Octamer-binding protein 3, Oct-3, Octamer-binding protein 4, Oct-4, Octamer-binding transcription factor 3, OTF-3, POU5F1, OCT3, OCT4, OTF3, OTF4, MGC22487.

Source: Escherichia Coli.

Physical Appearance: Sterile filtered colorless solution.

Amino Acid Sequence: The sequence of the first five N-terminal amino acids was determined and was found to be Met-Ala-Gly-His-Leu.

Purity: Greater than 95.0% as determined by:(a) Analysis by SEC-HPLC.(b) Analysis by SDS-PAGE.

Formulation:
POU5F1 0.2

Stability:
Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time.Avoid multiple freeze-thaw cycles.

Usage:
NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drµgs, agricultural or pesticidal products, food additives or household chemicals.

Introduction:
POU5F1 is a homeodomain transcription factor of the POU family, expressed in embryonic stem (ES) cells and embryonic carcinoma (EC) cells.POU5F1 is significantly involved in the signaling pathway for maintaining self-renewal and pluripotency of ES cells. POU5F1 has 2 distinct DNA binding domains which independently bind half-sites of the canonical octamer motif. This flexibility allows POU5F1 to bind with distinct DNA motifs by forming heterodimers with other transcription factors or by forming homodimers in several conformations. Human POU5F1 contains a 75aa POU specific (POUS) domain and a 60aa POU-Homeo-(POUH) domain connected by a linker region. The Human POU5F1 specifically interacts with Octamer motif ATGCAAAT. In addition, 2 proline-rich domains in the N-terminal and C-terminal regions are vital for POU5F1 transactivation. POU5F1 regulates a number of target genes and has been shown to work jointly with other transcription factors including Sox2 as well as Nanog to sustain stem cell potency and self-renewal.

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