

Recombinant Mouse Pou5f1, TAT-tagged

Cat. No. Pou5f1-200M **Lot. No.** (See product label)

SPECIFICATION

Product Overview Recombinant Mouse TAT-Oct-3/4 is produced with our E. coli expression system. The target protein is expressed with sequence (Met1-Asn352) of Mouse OCT4 fused with a TAT tag at the N-terminus.

Species Mouse

Source E.coli

Description Octamer-Binding Protein 4 (Oct4) is a homeodomain transcription factor of the POU family and can be expressed in embryonic stem cells and embryonic carcinoma cells. Oct 4 is critically involved in the signaling pathway for maintaining self-renewal and pluripotency of embryonic stem cells. Oct4 binds to the octamer motif to form a trimeric complex with SOX2 on DNA and controls the expression of many genes involved in embryonic development, such as YES1, FGF4, UTF1, ZFP206. Oct4 can regulate SOX2 and Nanog to support stem cell potency and self-renewal. The transcriptional activity can be positively regulated by PKM2.

AA Sequence MAGHLASDFAFSPPPGGGDSAGLEPGWVDPRTWLSFQGPPGGPGIGPGSEVLGI
 SPCPPAYEFC GGMAYCGPQVGLGLVPQVGVETLQPEGQAGARVESNSEGTSSEP
 CADRPNAVKLEKVEPTPEESQ DMKALQKELEQFAKLLKQKRITLGYTQADVGLTLG
 VLFGKVFSQTTICRFEALQLSLKNMCKLRP LLEKWVEEADNNENLQEICKSETLVQA
 RKRKRTSIENRVRWSLETMFLKCPKPSLQQITHIANQL GLEKDVVRVWFCNRRQKG
 KRSSIEYSQREEYEATGTPFPGGAVSFPLPPGPHFGTPGYGSPHFTT LYSVPFPEG
 EAFPSVPVTALGSPMHSN

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Endotoxin Less than 0.1 ng/μg (1 IEU/μg).

Purity Greater than 95% as determined by SEC-HPLC and reducing SDS-PAGE.

GENE INFORMATION

Gene Name Pou5f1 POU domain, class 5, transcription factor 1 [*Mus musculus*]

Official Symbol Pou5f1

Synonyms POU5F1; POU domain, class 5, transcription factor 1; octamer-binding protein 3; octamer-binding protein 4; octamer-binding transcription factor 3; Oct3; Oct4; Otf3; Otf4; NF-A3; Oct-3; Oct-4; Otf-3; Otf-4; Otf3g; Oct3/4; Oct-3/4; Otf3-rs7;

Gene ID 18999

mRNA Refseq NM_001252452

Protein Refseq NP_001239381

Pathway PluriNetWork, organism-specific biosystem; Wnt Signaling Pathway and Pluripotency, organism-specific biosystem;

Function DNA binding; DNA binding; DNA binding; chromatin binding; miRNA binding; protein binding; sequence-specific DNA binding; sequence-specific DNA binding; sequence-specific DNA binding RNA polymerase II transcription factor activity; sequence-specific DNA binding transcription factor activity; sequence-specific DNA binding transcription factor activity; transcription corepressor activity; transcription factor binding; transcription factor binding; transcription regulatory region DNA binding; transcription regulatory region DNA binding; ubiquitin protein ligase binding; ubiquitin protein ligase binding;

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