

## Recombinant Mouse Pou5f1, Arg-tagged

Cat. No. Pou5f1-164M Lot. No. (See product label)

### SPECIFICATION

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

**Species** Mouse

**Source** E.coli

**ProteinLength** 1-352 a.a.

**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  
 VLFQKVFVSQTTICRFEALQLSLKNMCKLRP LLEKWVEEADNNENLQEICKSETLVQA  
 RKRKRTSIENRVRWSLETMFLKCPKPSLQQITHIANQL GLEKDVVVRVWFCNRRQKG

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KRSSIEYSQREEYEATGTPFPGGAVSFPLPPGPHFGTPGYGSPHFTT LYSVPFPEG  
EAFPSVPVTALGSPMHSN

**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

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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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