

## Recombinant Human POU5F1 protein, MYC/DDK-tagged

Cat. No. POU5F1-117H    Lot. No. (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| <b>Product Overview</b> | Recombinant Human POU5F1, transcript variant 1, fused with MYC/DDK tag at C-terminal was expressed in HEK293.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Source</b>           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Description</b>      | This gene encodes a transcription factor containing a POU homeodomain that plays a key role in embryonic development and stem cell pluripotency. Aberrant expression of this gene in adult tissues is associated with tumorigenesis. This gene can participate in a translocation with the Ewing's sarcoma gene on chromosome 21, which also leads to tumor formation. Alternative splicing, as well as usage of alternative AUG and non-AUG translation initiation codons, results in multiple isoforms. One of the AUG start codons is polymorphic in human populations. Related pseudogenes have been identified on chromosomes 1, 3, 8, 10, and 12. |
| <b>Form</b>             | 25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Molecular Mass</b>   | 38.4 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Purity</b>           | > 80% as determined by SDS-PAGE and Coomassie blue staining                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Concentration</b>    | >50 ug/mL as determined by microplate BCA method                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

### GENE INFORMATION

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|                            |                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>           | POU5F1 POU class 5 homeobox 1 [ Homo sapiens ]                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Official Symbol</b>     | POU5F1                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Synonyms</b>            | POU5F1; POU class 5 homeobox 1; OTF3, POU domain class 5, transcription factor 1; POU domain, class 5, transcription factor 1; MGC22487; OCT3; Oct4; octamer-binding protein 3; octamer-binding protein 4; POU domain transcription factor OCT4; octamer-binding transcription factor 3; octamer-binding transcription factor-3; POU-type homeodomain-containing DNA-binding protein; OCT4; OTF3; OTF4; OTF-3; Oct-3; Oct-4; |
| <b>Gene ID</b>             | 5460                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>mRNA Refseq</b>         | NM_002701                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Protein Refseq</b>      | NP_002692                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>MIM</b>                 | 164177                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>UniProt ID</b>          | Q01860                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Chromosome Location</b> | 6p21.33                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Pathway</b>             | HIF-2-alpha transcription factor network, organism-specific biosystem; Wnt Signaling Pathway and Pluripotency, organism-specific biosystem;                                                                                                                                                                                                                                                                                  |
| <b>Function</b>            | DNA binding; miRNA binding; protein binding; sequence-specific DNA binding; sequence-specific DNA binding RNA polymerase II transcription factor activity; sequence-specific DNA binding transcription factor activity; transcription factor binding; transcription regulatory region DNA binding; ubiquitin protein ligase binding;                                                                                         |

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