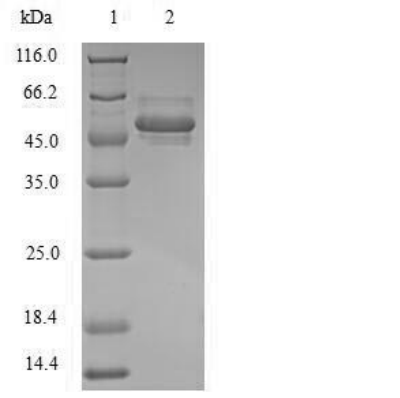
Recombinant Human POU domain, class 5, transcription factor 1 (POU5F1)

Product Code	CSB-EP018403HU
Relevance	Transcription factor that binds to the octamer motif (5'-ATTTGCAT-3'). Forms a trimeric complex with SOX2 on DNA and controls the expression of a number of genes involved in embryonic development such as YES1, FGF4, UTF1 and ZFP206. Critical for early embryogenesis and for embryonic stem cell pluripotency.
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	Q01860
Alias	Octamer-binding protein 3
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	MAGHLASDFAFSPPPGGGGDGPGGPEPGWVDPRTWLSFQGPPGGPGIGPG VGPGSEVWGIPPCPPPYEFCGGMAYCGPQVGVGLVPQGGLETSQPEGEAGV GVESNSDGASPEPCTVTPGAVKLEKEKLEQNPEESQDIKALQKELEQFAKLLK QKRITLGYTQADVGLTLGVLFGKVFSQTTICRFEALQLSFKNMCKLRPLLQKWV EEADNNENLQEICKAETLVQARKRKRTSIENRVRGNLENLFLQCPKPTLQQISH IAQQLGLEKDVVRVWFCNRRQKGKRSSSDYAQREDFEAAGSPFSGGPVSFPL APGPHFGTPGYGSPHFTALYSSVPFPEGEAFPPVSVTTLGSPMHSN
Lead Time	3-7 business days
Research Area	Epigenetics and Nuclear Signaling
Source	E.coli
Gene Names	POU5F1
Protein Names	POU domain, class 5, transcription factor 1Alternative name(s): Octamer-binding protein 3 Short name= Oct-3 Octamer-binding transcription factor 3 Short name= OTF-3
Expression Region	1-360aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-B2M-tagged
Mol. Weight	52.6kDa
Protein Description	Full Length

Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

Like all recombinant proteins, this Recombinant Human POU5F1 protein was encoded by recombinant DNA. The recombinant DNA was introduced to a plasmid in which the gene of POU5F1 was cloned downstream of a promoter region. When the plasmid was introduced to the cells of E.coli, the E.coli's own protein synthesis pathways would then result in the expression of the POU5F1 protein. And the next step was protein purification. The purity of this recombinant protein is 90%+ determined by SDS-PAGE.

POU Class 5 Homeobox 1 (POU5F1) is a transcription factor of the POU family that binds an octameric sequence motif to activate the expression of downstream genes. POU5F1 has been identified as one of the most important CSC markers and participates in stemness maintenance in various tumors. Published literatures have certified that increased POU5F1 was correlated with clinicopathological features and prognosis not only in LIHC, but also in bladder carcinoma, non-small cell lung carcinoma, and oral squamous cell cancer. Although many studies have been performed, the prognostic significance of POU5F1 in cancers remains controversial, and the functions of POU5F1 in the regulatory network of tumors are not fully recognized. Some studies have come to different or even totally opposite conclusions regarding the prognostic value of POU5F1 and the role of POU5F1 in tumor development. For instance, He et al. showed that elevated POU5F1 in esophageal squamous cell carcinoma symbolized poor survival outcomes. However, Ge et al. found that high expression of POU5F1 was connected with longer survival in esophageal squamous cell carcinoma. Nevertheless, POU5F1 may serve as an essential predictive factor for multiple cancers in the near future.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.