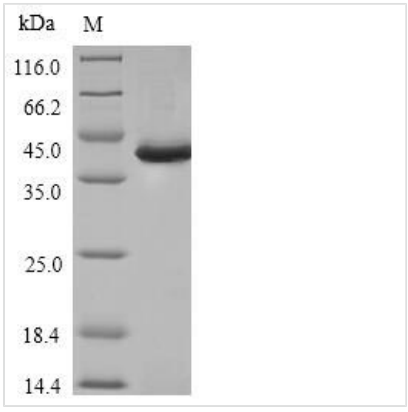
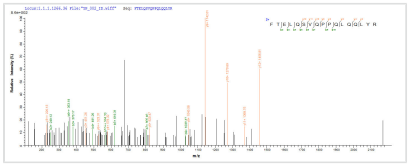
Recombinant Human Transcription factor PU.1 (SPI1)

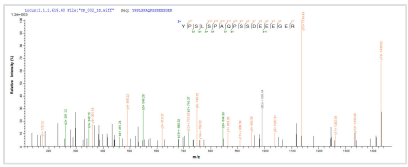
Product Code	CSB-EP022567HU
Relevance	Binds to the PU-box, a purine-rich DNA sequence (5'-GAGGAA-3') that can act as a lymphoid-specific enhancer. This protein is a transcriptional activator that may be specifically involved in the differentiation or activation of macrophages or B-cells. Also binds RNA and may modulate pre-mRNA splicing
Abbreviation	Recombinant Human SPI1 protein
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.	P17947
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	MLQACKMEGFPLVPPPSEDLVPYDTDLYQRQTHEYYPYLSSDGESHSDHYW DFHPHHVHSEFESFAENNFTELQSVQPPQLQQLYRHMELEQMHVLDTPMVPP HPSLGHQVSYLPRMCLQYPSLSPAQPSSDEEEGERQSPPLEVSDGEADGLEP GPGLLPGETGSKKKIRLYQFLLDLLRSGDMKDSIWWVDKDKGTFQFSSKHKEA LAHRWGIQKGNRKKMTYQKMARALRNYGKTGEVKKVKKKLTYQFSGEVLGR GGLAERRHPPH
Research Area	Immunology
Source	E.coli
Target Names	SPI1
Protein Names	31 kDa-transforming protein
Expression Region	1-270aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	35.1kDa
Protein Length	Full Length
Image	



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



Based on the SEQUEST from database of E.coli host and target protein, the LC-MS/MS Analysis result of CSB-EP022567HU could indicate that this peptide derived from E.coli-expressed Homo sapiens (Human) SPI1.



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Description

To make this Recombinant Human SPI1 protein, the SPI1 gene was isolated at first and cloned into an expression vector. CUSABIO has built a mature recombinant protein platform. This Recombinant Human SPI1 protein was developed in the platform. It was expressed in E.coli at the region of 1-270aa of the Human SPI1 protein. N-terminal 6xHis tag was fused with the expression vector for affinity and purification purposes. The purity is 85%+ determined by SDS-PAGE.

SPI1 gene encodes the hematopoietic master TF PU.1. Previous studies define the clinical and molecular phenotype of this novel inherited PU.1 haploinsufficiency syndrome, which they term PU.1-mutated agammaglobulinemia (PU.MA). PU.1 is a key transcriptional regulator required in the development of multiple hematopoietic lineages. Somatic mutations in SPI1 have been reported in the context of acute myeloid leukemia. However germline variants impacting human SPI1 have not been previously identified. Mouse models of Spi1-deficient hematopoiesis indicate a crucial role for PU.1 in early lineage commitment, differentiation of multiple myeloid lineages, as well as B cell development. However, the precise effect of SPI1 loss on human hematopoiesis has remained unknown. PU.1 has been shown to have multifaceted roles in hematopoiesis, with reduced PU.1 levels causing B cell developmental arrest, but other specific PU.1 perturbations can favor B cell over myeloid lineage development.

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.
Shelf Life	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.