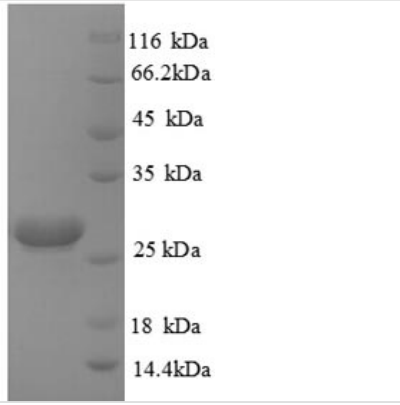
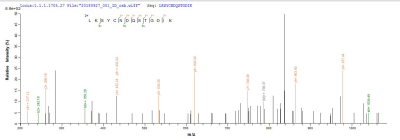
Recombinant Human Hypoxanthine-guanine phosphoribosyltransferase (HPRT1)

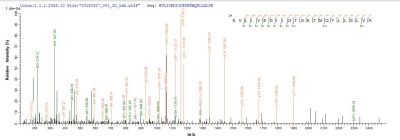
Product Code	CSB-EP010706HU
Relevance	Converts guanine to guanosine monophosphate, and hypoxanthine to inosine monophosphate. Transfers the 5-phosphoribosyl group from 5-phosphoribosylpyrophosphate onto the purine. Plays a central role in the generation of purine nucleotides through the purine salvage pathway.
Abbreviation	Recombinant Human HPRT1 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.	P00492
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	ATRSPGVVISDDEPGYDLDLFCIPNHYAEDLERVFIPHGLIMDRTERLARDVMKEMGGHHIVALCVLKGGYKFFADLLDYIKALNRNSDRSIPMTVDFIRLKSYCNDQSTGDIKVIGGDDLSTLTGKNVLIVEDIIDTGKTMQTLLSLVRQYNPKMVKVASLLVKRTPRSVGYKPDFVGFEIPDKFVVGYALDYNEYFRDLNHVCVISETGKAKYKA
Research Area	Metabolism
Source	E.coli
Target Names	HPRT1
Expression Region	2-218aa
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	28.4kDa
Protein Length	Full Length of Mature Protein
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-RP158274h could indicate that this peptide derived from E.coli-expressed Homo sapiens (Human) HPRT1.



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Description

Amino acids 2-218 form the expressed segment for recombinant Human HPRT1. The calculated molecular weight for this HPRT1 protein is 28.4 kDa. This protein is generated in a e.coli-based system. The N-terminal 6xHis tag was fused into the coding gene segment of HPRT1, making it easier to detect and purify the HPRT1 recombinant protein in the later stages of expression and purification.

The human hypoxanthine-guanine phosphoribosyltransferase (HPRT1) is an essential enzyme that plays a critical role in the purine salvage pathway, which is responsible for recycling and salvaging purine bases (hypoxanthine and guanine) to synthesize nucleotides. HPRT1 catalyzes the conversion of hypoxanthine and guanine to their respective nucleotides, inosine monophosphate (IMP) and guanosine monophosphate (GMP), utilizing phosphoribosyl pyrophosphate (PRPP) as a substrate. Mutations in the HPRT1 gene can lead to Lesch-Nyhan syndrome, a rare genetic disorder characterized by neurological and behavioral abnormalities, as well as overproduction of uric acid. Research on HPRT1 is crucial for understanding purine metabolism, nucleotide biosynthesis, and the molecular basis of associated genetic disorders.

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.