





# Recombinant Bovine Pregnancy-associated glycoprotein 1

<b>Product Code</b>	CSB-EP644917BO
Relevance	Appears to be proteolytically inactive.
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.	Q29432
Alias	Pregnancy-specific protein B Short name: PSP-B
Product Type	Recombinant Protein
Immunogen Species	Bos taurus (Bovine)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	RGSNLTTHPLRNIKDLVYMGNITIGTPPQEFQVVFDTASSDLWVPSDFCTSPAC STHVRFRHLQSSTFRLTNKTFRITYGSGRMKGVVVHDTVRIGNLVSTDQPFGL SIEEYGFEGRIYDGVLGLNYPNISFSGAIPIFDKLKNQRAISEPVFAFYLSKDERE GSVVMFGGVDHRYYEGELNWVPLIQAGDWSVHMDRISIERKIIACSDGCKALV DTGTSDIVGPRRLVNNIHRLIGAIPRGSEHYVPCSEVNTLPSIVFTINGINYPVPG RAYILKDDRGRCYTTFQENRVSSSTETWYLGDVFLRLYFSVFDRGNDRIGLAR AV
Lead Time	3-7 business days
Research Area	others
Source	E.coli
Protein Names	Recommended name: Pregnancy-associated glycoprotein 1 Short name= PAG 1 EC= 3.4.23Alternative name(s): Pregnancy-specific protein B Short name= PSP-B
Expression Region	54-380aa
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	40.7kDa
<b>Protein Description</b>	Full Length of Mature Protein
Image	

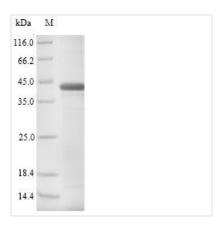
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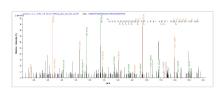




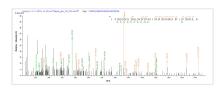




(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



Based on the SEQUEST from database of E.coli host and target protein, the LC-MS/MS Analysis result of CSB-EP644917BO could indicate that this peptide derived from E.coli-expressed Bos taurus (Bovine) PAG1.



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## **Description**

Recombinant bovine pregnancy-associated glycoprotein 1 (PAG1) production involves several critical steps, starting with the isolation of the target gene that encodes the 54-380aa of the bovine PAG1. The gene is fused with an Nterminal 6xHis-tag gene and then cloned into an expression vector, which is introduced into E. coli cells using transformation. The E. coli cells express the recombinant PAG1 protein, which is collected from the cell lysate. Purification of the protein is typically achieved using affinity chromatography. The final stage involves measuring the protein's purity through SDS-PAGE. Its purity is over 90%.

Bovine PAG1 is a glycoprotein produced by trophoblast cells in the placenta and is considered an important marker for pregnancy in cows [1][2]. It can be detected in the serum and milk of pregnant cows. Various studies have focused on developing assays, such as radioimmunoassays and ELISAs, to measure PAG1 levels for accurate pregnancy diagnosis in cattle [3][4][5]. Research has shown that PAG1 levels in plasma can vary throughout gestation and are influenced by factors like fetal number [6]. Additionally, PAG1 has been associated with predicting abortion in dairy cows infected with Neospora caninum [7].

The detection and quantification of PAG1 play a crucial role in reproductive management in cattle. Studies have compared methods such as ultrasonography, ELISA, and radioimmunoassays for pregnancy diagnosis, emphasizing the importance of PAG1 testing in dairy cows [5][8]. Furthermore, research has explored the potential of using PAG1 levels to monitor induced abortions and hormonal profiles in heifers [9].

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#### References:

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### 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



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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.