

Maltose Binding Protein (MBP) Active Protein | MBP active protein

Active Maltose Binding Protein (MBP)

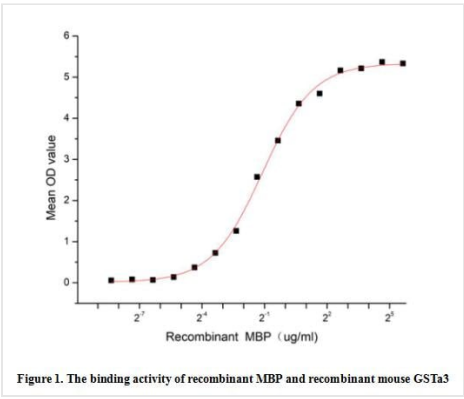
CATALOG # AAA161942	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Maltose Binding Protein (MBP); Active Maltose Binding Protein (MBP); Maltose Binding Protein4; MBP active protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater than 95% by SDS-PAGE
Form/Format	Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Sequence	Lys27~Thr3 92
Applicable Applications for MBP active protein	Activity Assay, Cell Culture
Species	General
Expression System	Prokaryotic expression
Tag	N-terminal His Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	6.2
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months

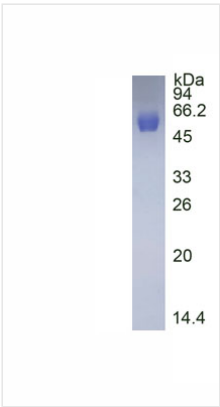


Bioactivity

Maltose binding protein (MBP) encoded by the malE gene in Escherichia coli, is a 44-kD monomeric periplasmic protein. MBP is component of the Escherichia coli maltose/maltodextrin system, which regulates the uptake and catabolism of maltodextrins as part of the chemotactic response. This protein is used in recombinant protein expression as an affinity and solubility tag. Glutathione S Transferase Alpha 3 (GSTa3) has been identified as an interactor of MBP, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant MBP and recombinant mouse GSTa3. Briefly, biotin-linked MBP were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to GSTa3-coated microtiter wells and incubated for 1h at 37 degree C. Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30min, then wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 degree C. Finally, add 50 ul stop solution to the wells and read at 450 nm immediately. The binding activity of recombinant MBP and recombinant mouse GSTa3 was shown in Figure 1, the EC50 for this effect is 0.46 ug/mL.

SDS-PAGE

Figure. SDS-PAGE



ADDITIONAL INFORMATION

Product Categories/Family for MBP active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	16131860
NCBI GeneID	948538
NCBI Accession #	NP_418458.1
NCBI GenBank Nucleotide #	NC_000913.3
UniProt Accession #	P0AEX9; P02928; Q2M6S0
Molecular Weight	43,388 Da
NCBI Official Full Name	maltose transporter subunit
NCBI Official Symbol	malE
NCBI Official Synonym Symbols	ECK4026; JW3994; malJ
NCBI Protein Information	maltose transporter subunit
UniProt Protein Name	Maltose-binding periplasmic protein
UniProt Gene Name	malE

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.