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Datasheet for 200-401-385

Maltose Binding Protein (MBP) Epitope Tag Antibody

Overview

Description:	Anti-Maltose Binding Protein (MBP) Epitope Tag (RABBIT) Antibody - 200-401-385
Item No.:	200-401-385
Size:	1 mg
Applications:	ELISA, WB, IF
Reactivity:	MBP-Tag
Host Species:	Rabbit

Product Details

Background:	Epitope tags are short peptide sequences that are easily recognized by tag-specific antibodies. Due to their small size, epitope tags do not affect the tagged protein's biochemical properties. Most often sequences encoding the epitope tag are included with target DNA at the time of cloning to produce fusion proteins containing the epitope tag sequence. This allows anti-epitope tag antibodies to serve as universal detection reagents for any tag containing protein produced by recombinant means. This means that anti-epitope tag antibodies are a useful alternative to generating specific antibodies to identify, immunoprecipitate or immunoaffinity purify a recombinant protein. The anti-epitope tag antibody is usually functional in a variety of antibody-dependent experimental procedures. Expression vectors producing epitope tag fusion proteins are available for a variety of host expression systems including bacteria, yeast, insect and mammalian cells. Rockland Immunochemicals produces anti-epitope tag antibodies against many common epitope tags including Myc, GST, GFP, 6X His, MBP, FLAG and HA. Rockland Immunochemicals also produces antibodies to other tags including FITC, Rhodamine (TRITC), DNP and biotin.
Synonyms:	rabbit anti-MBP Epitope Tag Antibody, rabbit anti-Maltose Binding Protein Antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Reactivity:	MBP-Tag

Immunogen Type:	Recombinant Protein
Immunogen:	This antibody was purified from whole rabbit serum prepared by repeated immunizations with the MBP epitope tag recombinant protein.
Purity/Specificity:	This IgG purified antibody is directed against MBP and is useful in determining its presence in various assays. This polyclonal anti-MBP tag antibody detects over-expressed proteins containing the MBP epitope tag. To date this antibody has reacted with all MBP tagged proteins so far tested. In western blotting of bacterial extracts the antibody does not cross-react with endogenous proteins.

Application Details

Tested Applications:	ELISA, WB
Suggested Applications:	IF (Based on references)
Application Note:	Anti-MBP is optimally suited for monitoring the expression of MBP tagged fusion proteins. As such, anti-MBP/MBP can be used to identify fusion proteins containing the MBP epitope. The antibody recognizes the MBP epitope tag fused to the amino- or carboxy- termini of targeted proteins. This antibody has been tested by ELISA and western blotting against MBP containing recombinant proteins. Although not tested, this antibody is likely functional for immunoprecipitation and immunocytochemistry, and other immunodetection techniques. Maltose binding protein is a bacterial protein, which is often used in protein expression studies because it creates a stable fusion product that does not appear to interfere with the bioactivity of the protein of interest. It also allows for its easy purification from bacterial extracts under mild conditions. Anti-MBP is a companion to the pMAL protein expression system and can be used for the detection and purification of MBP-fusion proteins expressed in E. coli. By Western blot, a band is seen at ~ 42 kDa representing MBP.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:10,000-1:50,000
WB:	1:1,000-1:5,000

Formulation

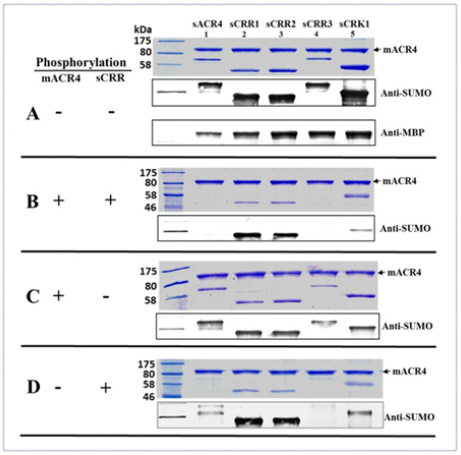
Physical State:	Lyophilized
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Reconstitution Volume:	1.0 mL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

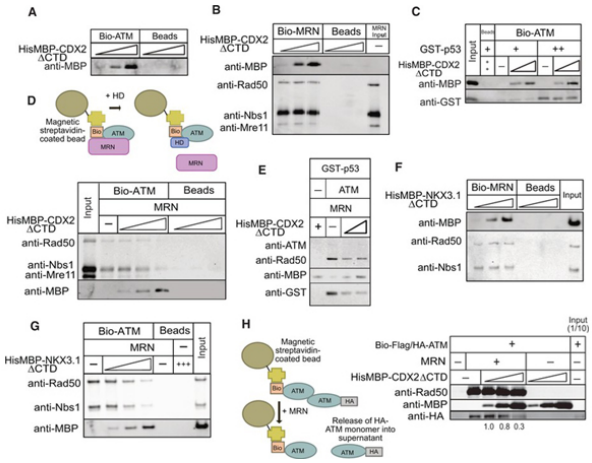
Shipping & Handling

Shipping Condition:	Ambient
Storage Condition:	Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western Blot
Pull-down assays were performed to determine the effects of phosphorylation on interactions between the ICDs of ACR4 and the CRRs. The autophosphorylation status of each protein was varied for individual experiments, (+) denotes autophosphorylated protein, (-) denotes unphosphorylated protein. In (A), mACR4 (-) and sCRRs (-), (B) mACR4 (+) and sCRRs (+), (C) mACR4 (+) and sCRRs (-), (D) mACR4 (-) and sCRRs (+). In A-D, proteins were separated by 12% SDS-PAGE (top panels) and the presence of interacting proteins was determined by anti-SUMO (p/n 200-401-428) western blot (lower panels). In the bottom panel of A, anti-MBP (p/n 200-401-385) western blot demonstrates the presence of mACR4 in each reaction.
Fig 2. PMID: 25756623

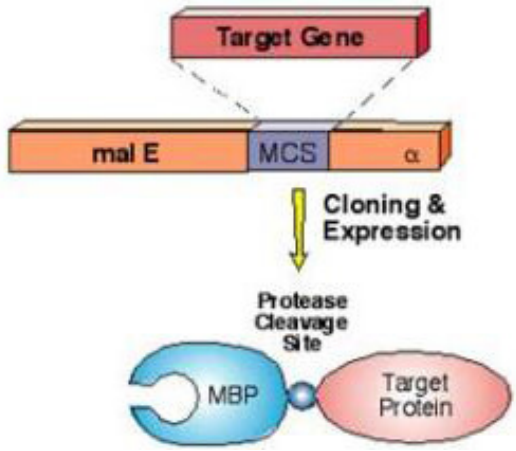


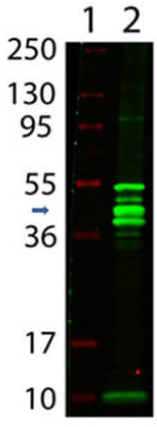
Western Blot

(A) Purified Bio-Flag ATM (30 nM) was incubated with 10, 50, or 250 nM HisMBP-CDX2ΔCTD protein and magnetic streptavidin-coated beads. Bound protein was isolated, separated by denaturing SDS-PAGE, and analyzed by western blotting with anti-MBP antibody.
(B) Purified Bio-MRN (25 nM) was incubated with 10, 50, or 250 nM HisMBP-CDX2ΔCTD and magnetic streptavidin-coated beads. Bound protein was analyzed as in (A) with anti-MBP antibody.
(C) Purified Bio-Flag ATM (30 nM) was incubated with 50 or 250 nM of HisMBP-CDX2ΔCTD protein and 100 nM GST-p53 substrate with magnetic streptavidin-coated beads as indicated. Bound protein was analyzed as in (A) with anti-MBP and anti-GST antibodies as indicated.
(D) Purified Bio-Flag-ATM (30 nM) was incubated with recombinant MRN complex (25 nM) and HisMBP-CDX2 DCTD protein (10, 50, or 250 nM) with magnetic streptavidin-coated beads. Bound protein was analyzed as in (A) with anti-MBP and anti-MRN antibodies as indicated.
(E) Purified Bio-Flag-ATM (30 nM) was incubated as in (D) in the presence of GST-p53 substrate protein (100 nM). Bound protein was analyzed as in (A) with anti-MBP, anti-MRN, and anti-ATM antibodies as indicated.
(F) Purified Bio-MRN (25 nM) was incubated with 10, 50, or 250 nM HisMBP-NKX3.1DCTD and magnetic streptavidin-coated beads. Bound protein was analyzed as in (A) with anti-MBP, Rad50, and Nbs1 antibodies.
(G) Purified Bio-Flag-ATM (30 nM) was incubated with recombinant MRN complex (25 nM) and HisMBP-CDX2 DCTD protein (10, 50, and 250 nM) with magnetic streptavidin-coated beads. ‘‘+++’’ indicates 250 nM HisMBP-NKX3.1ΔCTD. Bound protein was analyzed as in (A) with anti-MBP and anti-MRN antibodies as indicated.
(H) Purified Bio-Flag-ATM/HA-ATM dimeric complex was incubated with magnetic streptavidin-coated beads. After washing, purified MRN complex was added in the presence or absence of CDX2 ΔCTD protein (10, 50, or 250 nM). After incubation and isolation of biotinylated ATM, the supernatant containing monomeric ATM was separated by denaturing SDS-PAGE and analyzed by western blotting with anti-HA, anti-Rad50, and anti-MBP antibodies as indicated.
Figure 3. PMID: 30089259

Western Blot
Western Blot of Anti-MBP epitope tag polyclonal antibody. Lane 1: 1.0 ug of recombinant protein containing the MBP epitope tag (p/n 000-001-385). Primary Antibody: Polyclonal rabbit-anti-MBP epitope tag at 0.5-1.0 ug/ml for 1 h at room temperature. Secondary Antibody: 1:2500 dilution of IRDye 800 conjugated Gt-a-Rabbit IgG [H&L] (code 611-132-122) for 30 min at room temperature. Imaging: LICOR's Odyssey® Infrared Imaging System was used to scan and process the image. Other detection systems will yield similar results. Predicted MW: ~42 kDa. A minor band at corresponding to multimers of this protein is also evident.

Pathway





Western Blot
Western Blot showing detection of Maltose Binding Protein (MBP). Lane 1: MW markers. Lane 2: Maltose Binding Protein (p/n 000-001-385) [0.05 µg]. Protein was run on a 4-20% gel and transferred to 0.45 µm nitrocellulose. Blocking with 1% BSA-TTBS (p/n MB-013, diluted to 1X) 30 min at 20°C. Primary Antibody: Anti-MBP (RABBIT) antibody (p/n 200-401-385) was used at 1:1000 overnight at 4°C. Secondary Antibody: Anti-Rabbit IgG (GOAT) IRDye800® conjugated antibody (p/n 611-131-002) was used at 1:20,000 in Blocking Buffer for Fluorescent Western Blotting (p/n MB-070) for 30 min at 20°C. Imaged on the LiCor Odyssey imaging system. Predicted MW: ~42 kDa, the other bands present are recombinant MBP breakdown.

References

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