

Product Specification Sheet

**Monoclonal Anti- MBP IgG & Antibody Conjugates**

<b>Cat # MBP11-M</b>	Mouse Monoclonal Anti-MBP ascites (unlabeled)	<b>SIZE:</b> 100 ul
<b>Cat. MBP11-C</b>	Recombinant pure MBP protein control for WB	<b>SIZE:</b> 100 ul
<b>Cat # MBP11-HRP</b>	Mouse Monoclonal Anti- MBP -HRP Conjugate	<b>SIZE:</b> 100 ul
<b>Cat # MBP11-AP</b>	Mouse Monoclonal Anti- MBP -AP Conjugate	<b>SIZE:</b> 100 ul

Recombinant DNA technology allows the addition of short pieces of well-defined tags, "peptides" or proteins at the amino or c-terminus of target genes, which can provide 'affinity handles' designed to bind specific matrices. Therefore, tags enables a selective identification and purification of the protein of interest. The addition of a maltose binding protein (MBP) tag creates a stable fusion product that does not appear to interfere with the activity of the protein or with the cellular localization of the MBP-tagged product (1, 2). The expression of polypeptides in-frame with maltose binding protein (MBP) allows for their easy, single-step purification from bacterial extracts under mild conditions using amylose resin (2). This system utilize a specific protease digestion site to facilitate correct cleavage of the fusion protein (1). Thus, the MBP system incorporates a factor Xa cleavage site at the carboxy terminus of the MBP sequence (3) and cleavage by factor Xa separates MBP from its fusion protein. Many recombinant proteins have been engineered with MBP tags to facilitate the detection, isolation and purification of these proteins (1-6). Anti-MBP may be used in various immunoassay to identify the expression of a MBP fusion protein.

**Source of Antibody and Conjugate**

**Cat#MBP11-M**

Balb/c mice were injected with purified recombinant MBP protein (Cat # MBP15-R) and resulting clones were selected to react with MBP. A clone (IgG1) was expanded as ascites (Cat # MBP11-M). It is supplied as 100 ul solution in liquid and 0.05% sodium azide or in powder forms. Reconstitute the powder in 100 ul water. Recommended dilution for Western (1:500-1:2K) and for ELISA (1:1K-1:20K). For IHC, suggested dilution is 1:500-1:12K.

**Suggested 2-Ab**

**Goat Anti-mouse IgG-HRP conjugate** Cat # 40320 (AP, biotin, FITC conjugates also available)

**Suggested -ve control IgG**

Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

**Cat#MBP11-C:**

MBP is expressed in E. coli containing a 23-aa polylinker of pMAL-C2 and purified >95% (mol wt ~42 Kda). MBP protein for Western blot +ve control (Cat # MBP11-C) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of MBP11-C for good visibility with antibody Cat # MBP11-A or MBP12-M. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the MBP11-C solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. This preparation is intended for qualitative purpose and not to serve as

standard of known concentration. Do not freeze, thaw, or heat repeatedly

**Cat # MBP11-HRP:** Anti-MBP was purified using protein A/G column and purified IgG was coupled to HRP (Cat # MBP11-HRP) using glutaraldehyde method. Antibody:HRP molar ratio is ~1.0-1.5). Anti-MBP-HRP conjugate is supplied in PBS, pH 7.4, 1% BSA containing 0.01% thimerosal as preservative. Do not add azide as it inhibits HRP activity. Store at 2-4oC for 2-4 weeks and at -20oC in suitable aliquots for long term storage. Do not store diluted (working solution) for more than a few hours.

**MBP11-HRP Suggested Conjugate Dilutions**

Western 1:500-:2K; ELISA: 1:1K-:10K

**Cat # MBP11-AP:** Anti-MBP was purified using protein A/G column and purified IgG was coupled to Alkaline phosphatase (Cat # MBP11-AP) using glutaraldehyde method. Antibody:AP molar ratio is ~1.0-1.5). Anti-MBP-AP conjugate is supplied in 0.05M Tris, pH 8.0, 1% BSA, and 1mM MgCl2, 50% glycerol, and 0.05% azide. Store at 2-4oC for 2-4 weeks and at -20oC in suitable aliquots for long term storage. Do not store diluted (working solution) for more than a few hours.

**MBP11-AP Suggested Conjugate Dilutions**

Western 1:500-:2K; ELISA: 1:1K-:10K

**Histochemistry & Immunofluorescence:** not tested. We recommend the use of affinity pure antibody at 2-10 ug/ml or enzyme conjugates at 1:200-1:2K.

**Specificity & Cross-reactivity**

Monoclonal Anti-MBP recognizes native and denatured-MBP in ELISA and Western.

**General References:** Narayanan, S., J. Chromatogr., 658, 237 (1994), Casey, J., et al., J. Immunol. Meth., 179, 105 (1995), Uhlen, M., and Moks, T., Meth. Enzymol., 185, 129 (1990), Skerra, A., et al., Bio/Technology, 9, 273 (1991).

*This product is for in vitro research use only.*

**Other Fusion tag antibodies available from ADI**

**Catalog# ProdDescription**

MBP11-AP Monoclonal Anti-Maltose binding protein (MBP)-AP conjugate  
 MBP11-C Maltose binding protein (MBP) (fusion tag) control for western  
 MBP11-HRP Monoclonal Anti-Maltose binding protein (MBP)-HRP  
 MBP11-M Monoclonal Anti-Maltose binding protein (MBP) (fusion tag)  
 MBP12-A Anti-Maltose binding protein (MBP) (fusion tag) IgG  
 MBP15-R-100 Maltose binding protein (MBP) (fusion tag) control for  
 MBP15-R-1000 Maltose binding protein (MBP) (fusion tag) control for  
 Anti-MBP, Poly-His, GST, beta-Gal, VSV-G, HA-tag, and c-myc

MBP11-M-C-HRP-AP 71216A