SANTA CRUZ BIOTECHNOLOGY, INC.

MBP-probe (R29.6): sc-13564

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Plasmid vectors for the expression of coding regions of eukaryotic genes in bacterial, insect and mammalian hosts are in common usage; such expression vectors frequently encode hybrid fusion proteins consisting in part of prokaryotic and in part, eukaryotic specified proteins. One such system utilizes maltose binding protein (MBP), the 370 amino acid product of the *E. coli* mal E gene. Plasmid vectors have been constructed utilizing the MBP domain that allow the synthesis of high levels of MBP-fusion proteins that can be purified in a one step procedure by affinity chromatography cross-linked amylose resin. Once bound to amylose, the MBP protein can then be separated from the target protein by cleavage by coagulation factor Xa at a specific four residue site. Alternatively, the intact fusion protein can be specifically eluted from the resin by the addition of excess free maltose. Subsequent to elution, MBP fusion protein can be visualized either by Western blot analysis or immunoprecipitation using antibodies specific for the MBP-tag. Expression systems utilizing the MBP fusion tag include pCG-806fx and pMal vectors.

SOURCE

MBP-probe (R29.6) is a mouse monoclonal antibody raised against maltose binding protein (MBP) fusion protein.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MBP-probe (R29.6) is available conjugated to agarose (sc-13564 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to either phycoerythrin (sc-13564 PE), fluorescein (sc-13564 FITC), Alexa Fluor® 488 (sc-13564 AF488), Alexa Fluor® 546 (sc-13564 AF546), Alexa Fluor® 594 (sc-13564 AF594) or Alexa Fluor® 647 (sc-13564 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13564 AF680) or Alexa Fluor® 790 (sc-13564 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

MBP-probe (R29.6) is recommended for detection of MBP fusion proteins by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Molecular Weight of MBP-probe: 40 kDa.

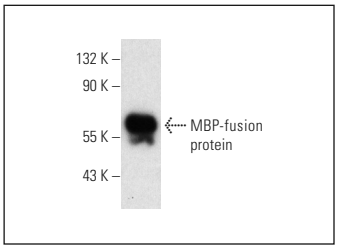
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



MBP-probe (R29.6): sc-13564. Western blot analysis of MBP-tagged fusion protein.

SELECT PRODUCT CITATIONS

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2. Cordaux, R., et al. 2006. Birth of a chimeric primate gene by capture of the transposase gene from a mobile element. Proc. Natl. Acad. Sci. USA 103: 8101-8106.
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4. Coster, G., et al. 2012. A dual interaction between the DNA damage response protein MDC1 and the RAG1 subunit of the V(D)J recombinase. J. Biol. Chem. 287: 36488-36498.
5. Fujita, H., et al. 2014. Mechanism underlying IκB kinase activation mediated by the linear ubiquitin chain assembly complex. Mol. Cell. Biol. 34: 1322-1335.
6. Hill, S.E., et al. 2015. Molecular details of olfactomedin domains provide pathway to structure-function studies. PLoS ONE 10: e0130888.
7. Xue, T., et al. 2015. Exposure to acoustic stimuli promotes the development and differentiation of neural stem cells from the cochlear nuclei through the clusterin pathway. Int. J. Mol. Med. 35: 637-644.
8. Wilmes, S., et al. 2015. Receptor dimerization dynamics as a regulatory valve for plasticity of type I interferon signaling. J. Cell Biol. 209: 579-593.
9. Ramírez De Arellano, A., et al. 2018. A 60 kDa prolactin variant secreted by cervical cancer cells modulates apoptosis and cytokine production. Oncol. Rep. 39: 1253-1260.
10. Takahashi, D. and Sakane, F. 2018. Expression and purification of human diacylglycerol kinase α from baculovirus-infected insect cells for structural studies. PeerJ 6: e5449.

RESEARCH USE

For research use only, not for use in diagnostic procedures.