SANTA CRUZ BIOTECHNOLOGY, INC.

V5-Probe (C-9): sc-271944

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 are frequently used to encode hybrid fusion proteins consisting of a eukaryotic target protein and a specialized region designed to aid in the purification and visualization of the target protein. An example is the V5-Probe which recognizes a small epitope, termed Pk, on the P/V proteins of the paramyxovirus simian virus 5 (SV5). This small peptide has proven useful in visualization and immunoaffinity purification of expressed fusion proteins. More than 20 recombinant proteins, some of which include transmembrane and secreted proteins, have been tagged with this epitope and detected via western blot, immunoprecipitation and immunofluorescence.

REFERENCES

1. Maniattis, T., et al. 1982. Molecular Cloning. Cold Spring Harbor Laboratory, Cold Spring Harbor, NY.
2. Duplay, P., et al. 1984. Sequences of the malE gene and of its product, the maltose-binding protein of *Escherichia coli* K12. J. Biol. Chem. 259: 10606-10613.

SOURCE

V5-Probe (C-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 87-111 within a C-terminal sequence of the P and V proteins of Simian virus 5 origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

V5-Probe (C-9) is available conjugated to agarose (sc-271944 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271944 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271944 PE), fluorescein (sc-271944 FITC), Alexa Fluor® 488 (sc-271944 AF488), Alexa Fluor® 546 (sc-271944 AF546), Alexa Fluor® 594 (sc-271944 AF594) or Alexa Fluor® 647 (sc-271944 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271944 AF680) or Alexa Fluor® 790 (sc-271944 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271944 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

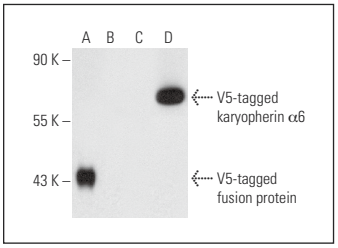
V5-Probe (C-9) is recommended for detection of V5 fusion proteins by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Positive Controls: karyopherin α6 (h): 293T Lysate: sc-173792.

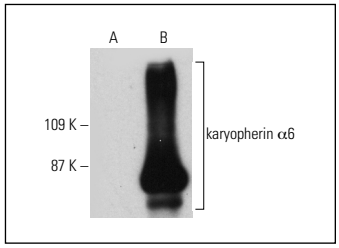
STORAGE

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

DATA



V5-Probe (C-9): sc-271944. Western blot analysis of V5-tagged fusion protein (**A**), non-tagged fusion protein (**B**), in non-transfected: sc-117752 (**C**) and V5-tagged human karyopherin α6 transfected: sc-173792 (**D**) 293T whole cell lysates.



V5-Probe (C-9) HRP: sc-271944 HRP. Direct western blot analysis of karyopherin α6 expression in non-transfected: sc-117752 (**A**) and human karyopherin α6 transfected: sc-173792 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Zhou, P., et al. 2013. Mixed lineage leukemia 5 (MLL5) protein regulates cell cycle progression and E2F1-responsive gene expression via association with host cell factor-1 (HCF-1). J. Biol. Chem. 288: 17532-17543.
2. Ginter, T., et al. 2014. Arginine residues within the DNA binding domain of STAT3 promote intracellular shuttling and phosphorylation of STAT3. Cell. Signal. 26: 1698-1706.
3. Bhat, A., et al. 2015. Rev7/Mad2B plays a critical role in the assembly of a functional mitotic spindle. Cell Cycle 14: 3929-3938.
4. Koh, H.J., et al. 2017. *Toxoplasma gondii* GRA7-targeted ASC and PLD1 promote antibacterial host defense via PKCα. PLoS Pathog. 13: e1006126.
5. Wang, Y., et al. 2017. Identifying the ubiquitination targets of E6AP by orthogonal ubiquitin transfer. Nat. Commun. 8: 2232.
6. Bhuripanyo, K., et al. 2018. Identifying the substrate proteins of U-box E3s E4B and CHIP by orthogonal ubiquitin transfer. Sci. Adv. 4: e1701393.
7. Zhou, P., et al. 2018. MLL5 suppresses antiviral innate immune response by facilitating STUB1-mediated RIG-I degradation. Nat. Commun. 9: 1243.
8. Leonard, B., et al. 2018. BET inhibition overcomes receptor tyrosine kinase-mediated cetuximab resistance in HNSCC. Cancer Res. 78: 4331-4343.
9. Chaytor, L., et al. 2019. The pioneering role of GATA2 in androgen receptor variant regulation is controlled by bromodomain and extraterminal proteins in castrate-resistant prostate cancer. Mol. Cancer Res. 17: 1264-1278.
10. Karakkat, J.V., et al. 2019. The metabolic sensor PASK is a histone 3 kinase that also regulates H3K4 methylation by associating with H3K4 MLL2 methyltransferase complex. Nucleic Acids Res. 47: 10086-10103.

RESEARCH USE

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