SANTA CRUZ BIOTECHNOLOGY, INC.

Baculovirus gp64 (AcV1): sc-65498

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Viruses are obligate intracellular parasites which, lacking the cellular machinery for self-reproduction, can reproduce only by invading and controlling other cells. Virus particles are composed of a nucleic acid genome consisting of either DNA or RNA encapsidated with a protein coat. The Baculovirus envelope protein gp64 is a phosphoglycoprotein located on the surface of infected cells and budded virions. This protein may be involved in fusion of the viral envelope with the endosomal membrane. It also contains N-linked glycosylation sites and hydrophobic C- and N-termini, a characteristic of signal and membrane anchor motifts in envelope glycoproteins.

REFERENCES

1. Blissard, G.W., et al. 1991. Baculovirus gp64 gene expression: analysis of sequences modulating early transcription and transactivation by IE1. J. Virol. 65: 5820-5827.
2. Blissard, G.W., et al. 1992. Baculovirus gp64 envelope glycoprotein is sufficient to mediate pH-dependent membrane fusion. J. Virol. 66: 6829-6835.

SOURCE

Baculovirus gp64 (AcV1) is a mouse monoclonal antibody raised against AcNPV extracellular nonoccluded virus (NOV).

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.

Baculovirus gp64 (AcV1) is available conjugated to agarose (sc-65498 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-65498 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-65498 PE), fluorescein (sc-65498 FITC), Alexa Fluor® 488 (sc-65498 AF488), Alexa Fluor® 546 (sc-65498 AF546), Alexa Fluor® 594 (sc-65498 AF594) or Alexa Fluor® 647 (sc-65498 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-65498 AF680) or Alexa Fluor® 790 (sc-65498 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Baculovirus gp64 (AcV1) is recommended for detection of baculovirus envelope protein gp64 of AcNPV origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1 µg per 1 x 10^6 cells).

Molecular Weight of Baculovirus gp64: 64-67 kDa.

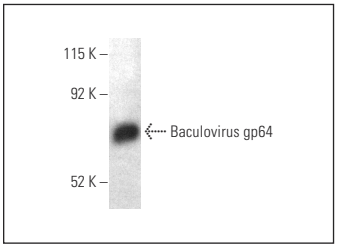
RECOMMENDED SUPPORT REAGENTS

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).

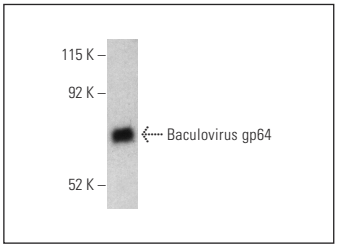
STORAGE

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

DATA



Baculovirus gp64 (AcV1) HRP: sc-65498 HRP. Western blot analysis of *Autographa californica* nucleopolyhedrovirus (AcNPV)(strain E2) recombinant gp64.



Baculovirus gp64 (AcV1): sc-65498. Western blot analysis of *Autographa californica* nucleopolyhedrovirus (AcNPV)(strain E2) recombinant gp64.

SELECT PRODUCT CITATIONS

1. Lehiy, C.J., et al. 2009. Virion-associated viral fibroblast growth factor stimulates cell motility. Virology 395: 152-160.
2. Zheng, H., et al. 2010. Baculovirus expression of cloned porcine arterivirus generates infectious particles in both insect and mammalian cells. J. Biotechnol. 150: 251-258.
3. Richard, J.P., et al. 2011. Intracellular curvature-generating proteins in cell-to-cell fusion. Biochem. J. 440: 185-193.
4. Kataoka, C., et al. 2012. Baculovirus gp64-mediated entry into mammalian cells. J. Virol. 86: 2610-2620.
5. Dhungel, B., et al. 2013. Baculovirus-mediated gene transfer in butterfly wings *in vivo:* an efficient expression system with an anti-gp64 antibody. BMC Biotechnol. 13: 27.
6. Iida, M., et al. 2013. A baculoviral display system to assay viral entry. Biol. Pharm. Bull. 36: 1867-1869.
7. Yu, Q., et al. 2015. *Autographa californica* multiple nucleopolyhedrovirus gp64 protein: analysis of domain I and V amino acid interactions and membrane fusion activity. Virology 488: 259-270.
8. Dhungel, B., et al. 2016. Distal-less induces elemental color patterns in *Junonia* butterfly wings. Zoological Lett. 2: 4.
9. Hong, S.S., et al. 2017. PUMA gene delivery to synoviocytes reduces inflammation and degeneration of arthritic joints. Nat. Commun. 8: 146.
10. Naik, N.G., et al. 2018. Baculovirus as an efficient vector for gene delivery into mosquitoes. Sci. Rep. 8: 17778.
11. Wei, S.C., et al. 2021. An integrated platform for serological detection and vaccination of COVID-19. Front. Immunol. 12: 771011.

RESEARCH USE

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