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Polyclonal Antibody to p35 baculovirus (full length) - Serum

Catalog No.: AP22078SU-S

Quantity: 50 µl

Background: The baculoviruses are a large, diverse family of DNA viruses that have evolved a number of mechanisms to manipulate thier insect hosts. One of these is the ability to regulate apoptosis during infection by expressing proteins that can inhibit caspase activation, including the caspase inhibitor p35 and the inhibitor of apoptosis (IAP) proteins (reviewed in Clem, 2005; Clarke and Clem, 2003; and Iller, 1997). The p35 baculovirus protein strongly inhibits caspase enzymatic activity, and is the the most broadly acting caspase inhibitor protein known. p35 baculovirus forms essentially irreversible complexes with its target caspases in a process that is accompanied by the cleavage of p35, generating two fragments of approximately 10 kDa and 25 kDa. These cleavage fragments remain associated with caspases and thereby block caspase activity. The ability of p35 to inhibit caspases along with the central role of caspases in the apoptotic process enables p35 baculovirus to block apoptosis in a phylogentically broad range of cells, and in response to a wide variety of apoptotic induction signals. For example, over expression of p35 in mammalian, insect, and nematode cells results in resistance to apoptosis.

Uniprot ID: P31354

NCBI: NP_047533.1

GeneID: 1488744

Host: Rabbit

Immunogen: Full-length recombinant p35 baculovirus protein

Format: **State:** Liquid neat serum
Preservatives: 0.05% Sodium Azide

Applications: **Immunoprecipitation:** 1/50-1/200.
Immnunocytochemistry/Immunofluorescence: 1/500-1/1000 (See Podratz et al (2011) for details).
Immunohistochemistry on Frozen Sections.
Immunohistochemistry on Paraffin Section: 1/1000-1/5000.
Western blot: 1/1000-1/2000.
p35 baculovirus may be observed as one or multiple bands on **Western blot:** p35 baculovirus is cleaved during its reaction with caspases. This results in cleavage of p35; 10 and 25 kDa fragments have been described. Additional breakdown p35 products may also result. Please see Riedl et al (2001) and Iller (1997) for additional information on p35 baculovirus cleavage.

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: This antibody detects 5 baculovirus in many species.
It recognizes p35 baculovirus (migrates at ~35 kDa on SDS-PAGE).

Storage: Upon receipt, store undiluted (in aliquots) at -20°C.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

Product Citations:

Originator or purchased from resellers:

1. Podratz JL, Staff NP, Froemel D, Wallner A, Wabnig F, Bieber AJ, et al. Drosophila melanogaster: a new model to study cisplatin-induced neurotoxicity. Neurobiol Dis. 2011 Aug;43(2):330-7. doi: 10.1016/j.nbd.2011.03.022. Epub 2011 Apr 15. PubMed PMID: 21514385.
2. Tian J, Zhang X, Liang B, Li S, Wu Z, Wang Q, et al. Expression of baculovirus anti-apoptotic genes p35 and op-iap in cotton (Gossypium hirsutum L.) enhances tolerance to verticillium wilt. PLoS One. 2010 Dec 3;5(12):e14218. doi: 10.1371/journal.pone.0014218. PubMed PMID: 21151969.

General Readings:

1. Clem RJ. The role of apoptosis in defense against baculovirus infection in insects. Curr Top Microbiol Immunol. 2005;289:113-29. PubMed PMID: 15791953.
2. Clarke TE, Clem RJ. Insect defenses against virus infection: the role of apoptosis. Int Rev Immunol. 2003 Sep-Dec;22(5-6):401-24. PubMed PMID: 12959752.
3. Miller LK. Baculovirus interaction with host apoptotic pathways. J Cell Physiol. 1997 Nov;173(2):178-82. PubMed PMID: 9365518.
4. Riedl SJ, Renatus M, Snipas SJ, Salvesen GS. Mechanism-based inactivation of caspases by the apoptotic suppressor p35. Biochemistry. 2001 Nov 6;40(44):13274-80. PubMed PMID: 11683637.

Pictures:

Western blot analysis of in vitro translated p35 baculovirus protein using AP22078SU-S at 1/2000. Full-length p35 is detected at ~35 kDa, lower molecular p35 breakdown/cleavage bands are also detected.