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Date: 10/28/2010

Anti-p10 (Avian orthoreovirus) , Rabbit-Polyclonal Antibody

Catalog No. GB-10378 **Quantity:** 100μg **Applications tested:** ELISA
Antigen species: Avian orthoreovirus **Reactivity:** Avian orthoreovirus
Host species: Rabbit **Form:** Peptide affinity purified antibody

Target description

The p10 fusion-associated small transmembrane protein of avian reovirus induces extensive syncytium formation in transfected cells. The p10-induced cell-cell fusion is restricted by rapid degradation of the majority of newly synthesized p10. The small ectodomain of p10 targets the protein for degradation following p10 insertion into an early membrane compartment. Paradoxically, conservative amino acid substitutions in the p10 ectodomain hydrophobic patch that eliminate fusion activity also increase p10 stability. The small amount of p10 that escapes intracellular degradation accumulates at the cell surface in a relatively stable form, where it mediates cell-cell fusion as a late-stage event in the virus replication cycle. The unusual relationship between a nonstructural viral membrane fusion protein and the replication cycle of a nonenveloped virus has apparently contributed to the evolution of a novel mechanism for restricting the extent of virus-induced cell-cell fusion.

Antigen

This polyclonal antibody was raised by immunizing rabbit with a synthetic peptide of p10.

Application

The antibody titer is more than 40 K for ELISA. It has not been tested in the other applications. However, for the first testing, we recommend 1/50,000 dilution for ELISA, 1/10,000 dilution for Western blot analysis (WB) of recombinant protein, 1/4,000 dilution for tissue extracts or cell lysates, 1/100 dilution for immuno-histochemistry (IHC) staining on frozen cryosections, 1/100 dilution for IHC staining on paraffin embedded sections.

Related Products

1. Anti-p17 pAb (GB-10379)
2. Anti-Sigma C(avian reovirus) mAb (PG-20009)

Ab dilution	Pre-bleed	Purified-Ab
1:0.1K	0.302	1.515
1:1K	0.181	0.680
1:10K	0.141	0.324
1:100K	0.138	0.144
1:1,000K	0.134	0.142
Titer		~49.38K

ELISA Protocol

Antigen is coated on EIA strips at 1μg per well. Add 200μl of blocking buffer and then wash wells with PBST buffer. Antiserum or peptide specific purified antibody GB-10378 is diluted in series as 10^2~10^6 folds and added in separate wells. Incubate antibody for 1hr. Wash unbound antibodies and add anti-rabbit IgG-HRP conjugate. Wash the plates and add substrate to develop color for 5 min. Read absorbance (ABS) at 650 nm. Amount of color is directly proportional to the amount of antibodies. Antibody is positive at >2 folds of ABS of control/Pre-Immune serum.

Storage

It is supplied as peptide affinity purified antibody in lyophilized powder. Redissolve the powder with 100 microliter sterile water will restore to the original concentration 1 mg/ml (1×PBS). Store at 4°C for short-term application. For long-term storage, aliquot and store at -20°C.

References

1. Hsu HW, Su HY, Huang PH, Lee BL, Liu HJ. Sequence and phylogenetic analysis of P10- and P17-encoding genes of avian reovirus.Avian Dis. Mar;49(1):36-42 (2005).

2. Shmulevitz M, Epand RF, Epand RM, Duncan R. Structural and functional properties of an unusual internal fusion peptide in a nonenveloped virus membrane fusion protein. J Virol. Mar;78(6):2808-18 (2004).

3. Bodelon G, Labrada L, Martinez-Costas J, Benavente J. Modification of late membrane permeability in avian reovirus-infected cells: viroporin activity of the S1-encoded nonstructural p10 protein. J Biol Chem. May 17;277(20):17789-96. Epub 2002 Mar 13 (2002).

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