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Rabbit Anti-HIV1 p55+p24+p17 antibody

SL4942R

Product Name:	HIV1 p55+p24+p17
Chinese Name:	艾滋病病毒抗体
Alias:	HIV p55+Capsid protein p24; HIV1 p55 + p24 + p17; CA antibody Capsid protein p24; Gag; Gag polyprotein; HIV1 matrix protein p17; HIV1 Pr55Gag; Human immunodeficiency virus 1 p17; Human immunodeficiency virus 1 p55; Human immunodeficiency virus type 1 p24; MA antibody Matrix protein; Matrix protein p17; Pr55; Pr55Gag; POL_HV1H2.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	HIV
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	17/24/55/162kDa
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from HIV1 p55+p24+p17:231-330/497
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	HIV1 performs highly complex orchestrated tasks during the assembly, budding, maturation and infection stages of the viral replication cycle. During viral assembly, the proteins form membrane associations and self-associations that ultimately result in budding of an immature virion from the infected cell. Gag precursors also function

during viral assembly to selectively bind and package two plus strands of genomic RNA. p55 is digested by HIV1 protease into intermediate products p41 and p15. p41 is further digested into matrix protein p17 and capsid protein p24. Likewise, p15 is further digested into nucleocapsid protein p7 and to p6 and p1.

Function:
Gag-Pol polyprotein and Gag polyprotein may regulate their own translation, by the binding genomic RNA in the 5'-UTR. At low concentration, Gag-Pol and Gag would promote translation, whereas at high concentration, the polyproteins encapsidate genomic RNA and then shutt off translation.
Matrix protein p17 has two main functions: in infected cell, it targets Gag and Gag-pol polyproteins to the plasma membrane via a multipartite membrane-binding signal, that includes its myristoylated N-terminus. The second function is to play a role in nuclear localization of the viral genome at the very start of cell infection. Matrix protein is the part of the pre-integration complex. It binds in the cytoplasm the human BAF protein which prevent autointegration of the viral genome, and might be included in virions at the ration of zero to 3 BAF dimer per virion. The myristoylation signal and the NLS thus exert conflicting influences its subcellular localization. The key regulation of these motifs might be phosphorylation of a portion of MA molecules on the C-terminal tyrosine at the time of virus maturation, by virion-associated cellular tyrosine kinase. Implicated in the release from host cell mediated by Vpu.
Capsid protein p24 forms the conical core that encapsulates the genomic RNA-nucleocapsid complex in the virion. Most core are conical, with only 7% tubular. The core is constituted by capsid protein hexamer subunits. The core is disassembled soon after virion entry. Interaction with human PPIA/CYPA protects the virus from restriction by human TRIM5-alpha and from an unknown antiviral activity in human cells. This capsid restriction by TRIM5 is one of the factors which restricts HIV-1 to the human species.
Nucleocapsid protein p7 encapsulates and protects viral dimeric unspliced (genomic) RNA. Binds these RNAs through its zinc fingers. Facilitates rearangement of nucleic acid secondary structure during retrotranscription of genomic RNA. This capability is referred to as nucleic acid chaperone activity.

Subunit:
Pre-integration complex interacts with human HMGA1. Matrix protein p17 is a trimer. Interacts with gp120 and human BAF. Capsid is a homodimer. Interacts with human PPIA/CYPA. The protease is a homodimer, whose active site consists of two apposed aspartic acid residues. The reverse transcriptase is a heterodimer of p66 RT and p51 RT (RT p66/p51). Heterodimerization of RT is essential for DNA polymerase activity. Despite the sequence identities, p66 RT and p51 RT have distinct folding. Integrase is a homodimer and possibly can form homotetramer. Integrase interacts with human SMARCB1/INI1 and human PSIP1/LEDGF isoform 1. Integrase interacts with human KPNA3; this interaction might play a role in nuclear import of the pre-integration complex. Integrase interacts with human NUP153; this interaction might play a role in nuclear import of the pre-integration complex (By similarity).

Subcellular Location:
Matrix protein p17: Virion (Potential). Host nucleus. Host cytoplasm. Host cell membrane; Lipid-anchor (Potential). Note=Following virus entry, the nuclear localization signal (NLS) of the matrix protein participates with Vpr to the nuclear localization of the viral genome. During virus production, the nuclear export activity of the matrix protein counteracts the NLS to maintain the Gag and Gag-Pol polyproteins in the cytoplasm, thereby directing unspliced RNA to the plasma membrane (By similarity).
Capsid protein p24: Virion (Potential).
Nucleocapsid protein p7: Virion (Potential).
Reverse transcriptase/ribonuclease H: Virion (Potential).
Integrase: Virion (Potential). Host nucleus (Potential). Host cytoplasm (Potential). Note=Nuclear at initial phase, cytoplasmic at assembly (Potential).

Post-translational modifications:
Specific enzymatic cleavages by the viral protease yield mature proteins. The protease is released by autocatalytic cleavage. The polyprotein is cleaved during and after budding, this process is termed maturation. Proteolytic cleavage of p66 RT removes the RNase H domain to yield the p51 RT subunit. Nucleocapsid protein p7 might be further cleaved after virus entry.
Capsid protein p24 is phosphorylated.
Matrix protein p17 is tyrosine phosphorylated presumably in the virion by a host kinase. This modification targets the matrix protein to the nucleus.

Similarity:
Contains 2 CCHC-type zinc fingers.
Contains 1 integrase catalytic domain.
Contains 1 integrase-type DNA-binding domain.
Contains 1 integrase-type zinc finger.
Contains 1 peptidase A2 domain.
Contains 1 reverse transcriptase domain.
Contains 1 RNase H domain.

SWISS:
P04585

Gene ID:
155030

Database links:
UniProtKB/Swiss-Prot: P04585.4

Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.