ID   Helical capsid protein.
AC   KW-XXXX
DE   Viral protein that forms a helical capsid to protect the viral genome.
DE   Viral helical capsids are about 7-30nm in diameter and 200-2000nm long.
GO   XXXXXX
HI   Cellular component: Virion; Capsid protein; Helical capsid protein.
CA   Cellular component.

ID   T=1 icosahedral capsid protein.
AC   KW-XXXX
DE   Viral protein that forms an icosahedral capsid with a T=1 symmetry to protect the viral genome. The T=1 capsid is composed of 60 subunits, each subunit occupying a quasi-equivalent position. The capsid diameter ranges from 18 to 35nm.
GO   XXXXXX
HI   Cellular component: Virion; Capsid protein; T=1 icosahedral capsid protein.
CA   Cellular component.

ID   T=2* icosahedral capsid protein.
AC   KW-XXXX
DE   Viral protein that forms an icosahedral capsid with a T=2* symmetry to protect the viral genome. The T=2* capsid is composed of 120 subunits. The T=2*" symmetry does not exist under the rules described by Caspar and Klug, strictly speaking the capsid has a T=1 symmetry composed of 60 dimeric subunits. The capsid diameter is about 40nm.
GO   XXXXXX
HI   Cellular component: Virion; Capsid protein; T=2* icosahedral capsid protein.
CA   Cellular component.

ID   T=3 icosahedral capsid protein.
AC   KW-XXXX
DE   Viral protein that forms an icosahedral capsid with a T=3 symmetry to protect the viral genome. The T=3 capsid is composed of 180 subunits, each subunit occupying a quasi-equivalent position. The capsid diameter ranges from 26 to 40nm.
GO   XXXXXX
HI   Cellular component: Virion; Capsid protein; T=3 icosahedral capsid protein.
CA   Cellular component.

ID   T=pseudo3 icosahedral capsid protein.
AC   KW-XXXX
DE   Viral protein that forms an icosahedral capsid with a pseudo T=3 symmetry to protect the viral genome. The pseudo T=pseudo3 capsid is composed of 180 subunits. Each subunit does not occupy a quasi-equivalent position, therefore the structure is called pseudo. The capsid diameter ranges from 26 to 40nm.
Cellular component: Virion; Capsid protein; T=pseudo3 icosahedral capsid protein.

Cellular component: Virion; Capsid protein; T=4 icosahedral capsid protein.

Cellular component: Virion; Capsid protein; T=7 icosahedral capsid protein.

Cellular component: Virion; Capsid protein; T=13 icosahedral capsid protein.

Cellular component: Virion; Capsid protein; T=16 icosahedral capsid protein.
ID T=25 icosahedral capsid protein.
AC KW-XXXX
DE Viral protein that forms an icosahedral capsid with a T=25 symmetry to protect the viral genome. The T=25 capsid is composed of 1500 subunits, each subunit occupying a quasi-equivalent position. It's diameter is about 90nm.
GO XXXXXX
HI Cellular component: Virion; Capsid protein; T=25 icosahedral capsid protein.
CA Cellular component.

ID T=147 icosahedral capsid protein.
AC KW-XXXX
DE Viral protein that forms an icosahedral capsid with a T=147 symmetry to protect the viral genome. The T=147 capsid is composed of 8820 subunits. It's diameter is about 185nm.
GO XXXXXX
HI Cellular component: Virion; Capsid protein; T=147 icosahedral capsid protein.
CA Cellular component.

ID T=169 icosahedral capsid protein.
AC KW-XXXX
DE Viral protein that forms an icosahedral capsid with a T=169 symmetry to protect the viral genome. The T=169 capsid is composed of 10140 subunits. It's diameter is about 165-190nm.
GO XXXXXX
HI Cellular component: Virion; Capsid protein; T=169 icosahedral capsid protein.
CA Cellular component.

ID T=219 icosahedral capsid protein.
AC KW-XXXX
DE Viral protein that forms an icosahedral capsid with a T=219 symmetry to protect the viral genome. The T=219 capsid is composed of 13140 subunits. It's diameter is about 130-160nm.
GO XXXXXX
HI Cellular component: Virion; Capsid protein; T=219 icosahedral capsid protein.
CA Cellular component.

ID Viral outer capsid.
AC KW-XXXX
DE Viral protein that is a component of the outer layer of a double or triple concentric icosahedral capsid. Outer capsids are part of reoviridae and cystoviridae virions.
GO XXXXXX
HI Cellular component: Virion; Capsid protein; Viral outer capsid.
CA Cellular component.
ID Viral inner capsid.
AC KW-XXXX
DE Viral protein that is a component of the inner layer of a double or triple concentric icosahedral capsid. Inner capsids are part of reoviridae and cystoviridae virions.
GO XXXXXX
HI Cellular component: Virion; Capsid protein; Viral inner capsid.
CA Cellular component.

ID Viral intermediate capsid.
AC KW-XXXX
DE Viral protein that is a component of the intermediate layer of a triple concentric icosahedral capsid. Intermediate capsids are part of reoviridae virions.
GO XXXXXX
HI Cellular component: Virion; Capsid protein; Viral intermediate capsid.
CA Cellular component.

ID Translational shunt protein.
AC KW-XXXX
DE Protein which is involved in translational shunting, a process in which ribosomes are loaded onto mRNA at the 5i-cap structure, start scanning for a short distance before bypassing the large internal leader region and initiating at a downstream start site. Shunting operates in plants, animals, and yeast translational systems, both in vivo and in vitro.
GO XXXXXX
HI Molecular function: Translational shunt protein.
CA Molecular function.

ID RNA translational shunting.
AC KW-XXXX
DE Protein which is derived from an mRNA by translational shunting, a process in which ribosomes are loaded onto mRNA at the 5i-cap structure, start scanning for a short distance before bypassing the large internal leader region and initiating at a downstream start site. Shunting operates in plants, animals, and yeast translational systems, both in vivo and in vitro.
GO XXXXXX
HI Coding sequence diversity: RNA translational shunting.
CA Coding sequence diversity.

ID Viral cap snatching.
AC KW-XXXX
DE Viral protein involved in cap snatching, a process in which a cellular mRNA is cleaved few nucleotides after the 5'cap. The resulting 10- to 13-nucleotides long capped fragment serve as primer for the initiation
of viral mRNA synthesis. Cap snatching is used by negative stranded RNA virus which do not encode a guanylyl transferase, like influenza or hantaviruses.

**GO** GO:XXXXXX;
**HI** Biological process: Viral cap snatching.

**CA** Biological process.

**ID** RNA termination-reinitiation.
**AC** KW-XXXX
**DE** Protein which is derived from an mRNA by termination-reinitiation, a process in which ribosomes translate the upstream ORF but following termination, a proportion of 40S subunits remain tethered to the mRNA and reinitiates at the start codon of the downstream ORF to another open reading frame. Termination-reinitiation operates in animals and yeast translational systems.

**GO** XXXXXX
**HI** Coding sequence diversity: RNA termination-reinitiation.
**CA** Coding sequence diversity.

**ID** RNA suppression of termination.
**AC** KW-XXXX
**DE** Protein which is derived from an mRNA by suppression of termination, a process in which a tRNA misreads a termination codon thereby producing a longer protein. RNA secondary structure after the stop codon plays a role in this process. The efficiency of suppression of termination is about 10% for most viruses. Termination suppression is involved in polyprotein synthesis of gamma and epsilon retroviruses, as well as all togaviridae.

**GO** XXXXXX
**HI** Coding sequence diversity: RNA suppression of termination.
**CA** Coding sequence diversity.

**ID** Initiation of viral infection
**AC** KW-XXXX
**DE** Viral protein involved in the virion's initiation of infection into a host cell, including internalization and penetration into the host cell cytoplasm, intracellular transport of viral components and genome release to the replication site of the virus.

**HI** Biological process: Initiation of viral infection.
**RU** OC: Viruses.
**CA** Biological process.

**//**

**ID** Viral attachment to host cell
**AC** KW-XXXX
**DE** Viral surface protein implicated in the binding to specific host surface molecule(s). This binding can lead to virion entry into the host cell, it can trigger signaling pathways, or it can allow the virion to be carried by the host cell to a specific organ.
Virion attachment to host cell surface.

Biological process: Initiation of viral infection; Viral attachment to host cell.

OC: Viruses.

Biological process.

Viral penetration into host cytoplasm

Viral protein involved in the entry of the entire virion or its genetic material into the host cell cytoplasm through cellular membrane(s). Entry is achieved through pore formation, or membrane fusion and/or endocytosis mechanisms. Penetration reactions occur mainly in five locations: the plasma membrane, early and late endosomes, caveosomes, and the ER.

Translocation of virus into host cell; Virion penetration into host cell.

Biological process: Initiation of viral infection; Viral penetration into host cytoplasm.

OC: Viruses.

Biological process.

Viral penetration into host nucleus

Viral protein necessary for the penetration of the viral genome into the host cell nucleus either via active nuclear transport through nuclear pore complexes (NPCs) or DNA injection through the nuclear membrane. Nuclear membrane permeabilization might also be possible. Viruses can also enter the nucleus during mitosis when the nuclear membrane is temporarily disintegrated (e.g. most retroviruses). All these strategies to cross the nuclear envelope barrier are associated with various level of capsid disassembly, since virus can pass intact (e.g. papovaviruses) or, in the case of injection, only the viral genome enters the nucleus (e.g. herpesviruses).

Entry of virus into host nucleus; Virion entry into host nucleus.

Biological process: Initiation of viral infection; Viral penetration into host nucleus.

OC: Viruses.

Biological process.

Receptor mediated endocytosis of virus by host

Protein involved in virus internalization into the host cell via receptor-mediated endocytosis. There are numerous receptor-mediated endocytic internalization mechanisms used by viruses to enter their host cells: clathrin-mediated endocytosis, caveolin-mediated endocytosis or clathrin- and caveolae-independent endocytosis.

GO:0019065; Receptor mediated endocytosis of virus by host

Biological process: Initiation of viral infection; Viral penetration into host cytoplasm; Receptor mediated endocytosis of virus by host.
Viruses.

Biological process.

Clathrin-mediated endocytosis of virus by host

Protein involved in virus internalization into the host cell via clathrin-mediated endocytosis. In response to an internalization signal, clathrin is assembled on the inside face of the plasma membrane to form characteristic invaginations or clathrin coated pits that pinch off through the action of DNML/Dynamin-1 or DNML2/Dynamin-2. The virus bound to its host cell receptor is internalized into clathrin-coated vesicles (CCV). Endocytic CCV deliver their viral content to early endosomes. The endosomal acidic pH and/or receptor binding usually induces structural modifications of the virus surface proteins that lead to penetration of the endosomal membrane via fusion or permeabilization mechanisms.

Virion endocytosis by clathrin-coated vesicle.

Biological process: Initiation of viral infection; Viral penetration into host cytoplasm; Receptor mediated endocytosis of virus by host; Clathrin-mediated endocytosis of virus by host.

Caveolae-mediated endocytosis of virus by host

Protein involved in virus internalization into the host cell via caveolae, which are specialized lipid rafts that form 50-70 nm flask-shaped invaginations of the plasma membrane. Caveolins form the structural backbone of caveolae (CAV1/caveolin-1 and CAV2/caveolin-2; CAV3/caveolin-3 in muscle cells). Internalization via caveolae is not a constitutive process but only occurs upon cell stimulation. Caveolae represent a low capacity but highly regulated pathway. The internalized viruses are first taken to pH-neutral organelles in the cytoplasm called caveosomes, which are finally delivered to the ER. This pathway is used by viruses including HPV-31, BK virus, NDV, RSV, Coxackie B virus, SV40, murine polyomavirus, and Echovirus 1.

Virion endocytosis by caveolin-coated vesicle.

Biological process: Initiation of viral infection; Viral penetration into host cytoplasm; Receptor mediated endocytosis of virus by host; Caveolae-mediated endocytosis of virus by host.

Clathrin- and caveolae-independent endocytosis of virus by host

Protein involved in virus internalization into the host cell via endocytic pathways that involve neither Clathrin nor Caveolin-1. These pathways can be further defined by their dependency to various molecules such as cholesterol, DNM2/Dynamin-2, small GTPases or tyrosine kinase and possibly involve non-caveolar lipid rafts.
Clathrin- and caveolae-independent pathways are used by viruses including poliovirus, human rhinovirus 14, lymphocytic choriomeningitis virus, murine norovirus-1 and SV40. Non-clathrin/non caveolae-mediated endocytosis by host. Biological process: Initiation of viral infection; Viral penetration into host cytoplasm; Receptor mediated endocytosis of virus by host; Clathrin- and caveolae-independent endocytosis of virus by host.

Viral entry into host cell via membrane fusion. Viral protein involved in the merging of the virion membrane with host membrane during viral penetration or egress in host cell. Viral fusion proteins drive this fusion reaction by undergoing a major conformational change that is triggered by interactions with the target cell. The specific trigger depends on the virus and can be exposure to low pH in the endocytic pathway or interaction of the virion with the host receptor(s).

Viral entry into host cell via plasma membrane fusion. Viral protein involved in the merging of the virus envelope with host plasma membrane during viral penetration into host cell. Viral fusion proteins drive this fusion reaction by undergoing a major conformational change that is triggered by interactions with the target cell. This pathway is used by viruses whose fusion protein is usually pH independent such as most paramyxoviruses, herpesviruses and retroviruses. MHV-JHM coronavirus has been shown to fuse directly with the host plasma membrane.

Viral entry into host cell via endosomal membrane fusion. Viral protein involved in the merging of the virus envelope with host endosomal membrane during viral penetration into host cell. Viral fusion proteins drive this fusion reaction by undergoing a major conformational change that is triggered by interactions with the target cell. The specific trigger is mainly endosome acidification.
which induce activation of the fusion protein by conformational
development. This pathway is used by enveloped viruses which are
decoyted and whose fusion protein is usually pH-dependent like
influenza A virus, rhabdoviruses, bornaviruses, filoviruses,
asfarviridiae, flaviviridae, alphaviruses, HIV-1, avian leukosis virus,
SARS, 229E, and MHV-2 coronaviruses.

Viral entry into host cell via plasma membrane fusion.

Viral envelope fusion with host endosomal membranes

Biological process: Initiation of viral infection; Viral penetration
into host cytoplasm; Viral envelope fusion with host membrane; Viral
envelope fusion with host endosomal membrane.

OC: Viruses.
CA Biological process.

Viral genome injection through the bacterial membranes

Injection of the viral genome directly through the bacterial
membranes. This process is mediated by the viral capsid which remains
outside the cell, and involve local degradation of cell wall by viral
lysozymes. Viruses belonging to the caudovirales (bacteriophages) have
been shown to inject their genome through the host membranes.

Viral genome ejection through host membranes.

Viral genome injection through the host plasma membrane

Biological process: Initiation of viral infection; Viral penetration
into host cytoplasm; Viral genome injection through the host plasma
membrane.

OC: Viruses.
CA Biological process.

+synonym: cf Fields 2007

Pore-mediated penetration of viral genome into host cell

Viral pore-forming protein, associated with the viral capsid, that
induces the formation of a transmembrane pore in the host membrane to
allow the viral genome entering the cytoplasm. This mechanism is used
by non-enveloped viruses such as human rhinovirus 2, poliovirus, and
some bacteriophages.

Membrane puncture-mediated penetration of viral genome into host cell

Biological process: Initiation of viral infection; Viral penetration
into host cytoplasm; Pore-mediated penetration of viral genome into host
cell.

OC: Viruses.
CA Biological process.

Viral penetration via permeabilization of host organelar membrane

Viral membrane-penetration protein, usually associated with the viral
capsid or released through programmed capsid partial disassembly, that
locally permeabilizes the bilayer integrity of a host organelar
membrane, such as endosomal, lysosomal, caveosomal or endoplasmic reticulum membrane, to allow viral escape and penetration into the cytoplasm. Viral membrane-penetration protein might require first to be activated, mostly through endosomal acidic pH or receptor binding to display its membrane penetrating activity. Non-enveloped viruses such as parvovirus, human reovirus, BDV, BTV, rotavirus, papillomavirus, Flock house virus permeabilize the host endosomal membrane to penetrate into the host cytoplasm.

Viral penetration via host endosomal membrane disruption by virus; viral penetration via perforation of host organellar membrane by virus.

Viral penetration via permeabilization of host organellar membrane.

Biological process: Initiation of viral infection; Viral penetration into host cytoplasm; Viral penetration via permeabilization of host organellar membrane.

OC: Viruses.

Biological process.

Viral penetration via lysis of host organellar membrane.

Viral membrane-lytic protein, usually associated with the viral capsid or released through programmed capsid partial disassembly, that induces major breakage of the bilayer integrity of host endosomal, lysosomal, or caveosomal membrane to allow viral escape and penetration into the cytoplasm. Viral membrane-lytic protein might require first to be activated, mostly through endosomal acidic pH or receptor binding to display its membrane lytic activity. Viruses such as human adenoviruses group C and D lyse the host endosomal membrane to penetrate into the host cytoplasm.

Viral penetration via lysis of host organellar membrane.

Biological process: Initiation of viral infection; Viral penetration into host cytoplasm; Viral penetration via lysis of host organellar membrane.

OC: Viruses.

Biological process.

Pilus-mediated viral adsorption onto host cell.

Viral protein involved in the interaction with bacterial conjugative F-pili, which are retractile filaments that protrude from gram-negative bacteria and normally mediate horizontal gene transfer. Binding to the pilus is followed by retraction of the pilus, which brings the bacteriophage in contact with the host cell membrane. Examples of bacteriophages which utilize the host-cell pilus as an attachment structure are bacteriophages M13, f1, fd, R17, Qbeta, Pf1, Pf3, phiKMV or phi6.

Pilus-mediated viral adsorption onto host cell.

Biological process: Viral attachment to host cell; Pilus-mediated viral adsorption onto host cell.

OC: Viruses.
CA Biological process.
//
ID Cytoplasmic active transport of viral material
AC KW-XXXX
DE Viral protein that interacts with the cytoskeleton and/or host cell motor proteins, and allows the active transport of viral components exceeding 20 nm through the host cytosol along cytoskeletal filaments.
DE Components can be transported across the cytoplasm during both virus entry and egress. Viruses such as adenoviruses, adeno-associated virus, vaccinia virus, poliovirus, canine parvovirus, African swine fever virus, rabies virus, human herpes virus 1, foamy virus are thought to use active intracellular transport of viral components.
GO GO:?????; Cytoplasmic active transport of viral material
HI Biological process: Initiation of viral infection; Cytoplasmic active transport of viral material.
RU OC: Viruses.
CA Biological process.
//
ID Microtubules-dependent active transport of viral material
AC KW-XXXX
DE Viral protein that interacts with microtubules and/or host cell motor proteins and allows active transport along microtubules of viral material across the host cell cytoplasm. Components can be transported across the cytoplasm during both virus entry and egress. This transport, which probably involves motor proteins like dynein and kinesin or polymerization/depolymerization reactions as a driving force, is mostly used by viruses that replicate their genomes near or in the nucleus. The trafficking direction is usually toward the nuclear membrane during entry and toward the periphery during egress after replication. Neurotropic viruses for example, often enter neurons at the terminal axon and their viral genome must be moved to cell bodies by axonal transport (retrograde transport). Viruses such as adenovirus, Adeno-associated virus, rabies virus, canine parvovirus, vaccinia, foamy virus, human papillomavirus 16 and herpes virus utilize this type of intracellular transport.
GO GO:?????; Microtubules-dependent active transport of viral material
HI Biological process: Initiation of viral infection; Cytoplasmic active transport of viral material; Microtubules-dependent active transport of viral material.
RU OC: Viruses.
CA Biological process.
//
ID Actin-dependent active transport of viral material
AC KW-XXXX
DE Viral protein that interacts with actin and/or host cell motor proteins and allows active transport along actin filaments of viral material across the host cell cytoplasm. This transport probably involves motor proteins like myosins or polymerization/depolymerization reactions as a driving force. It is apparently much more rapid than microtubules-dependent transport.
Viruses such as poliovirus utilize this type of intracellular transport.

Biological process: Initiation of viral infection; Cytoplasmic active transport of viral material; Actin-dependent active transport of viral material.

OC: Viruses.
CA: Biological process.

Molecular events that lead to the integration of a viral genome into the host chromosomal DNA. Integrated viral DNA is referred to as a provirus (also called prophage in the case of bacterial viruses). A provirus does not necessarily make new DNA copies of itself while integrated into a host genome in this way. Instead, it can remain latent and be passively replicated along with the host genome and passed on to the original cell's offspring; all descendants of the infected cell will also bear proviruses in their genomes. Host's environmental conditions changes can however reactivate the provirus leading to viral transcription and production of new infectious viruses (productive infection). Integration occurs in retroviruses, some phages, phycodnaviruses, Adeno-associated virus type 2, and Human herpesvirus 6A.

Biological process: Initiation of viral infection; Viral penetration into host nucleus; Provirus integration.

OC: Viruses.
CA: Biological process.

Viral protein that mediates fusion of an infected cell with neighbouring cells leading to the formation of multi-nucleate enlarged cells called syncytia. Usually these syncytia are the result of expression of a viral fusion protein at the host cell membrane during viral replication. Viruses such as herpesviruses are known to induce the formation of syncytia.

Induction by virus of host cell-cell fusion; Polykaryons formation in virally infected cells.

Biological process: Syncytium formation induced by viral infection.
OC: Viruses.
CA: Biological process.

Viral protein implicated in the fusion of the herpesviruses' primary envelope with host outer nuclear membrane during egress. During egress, herpesviruses acquire a transitory, primary envelope as they
bud at the inner nuclear membrane and gain access to the perinuclear space. This membrane is lost by fusing with the outer nuclear membrane during nuclear exit.

**GO:** GO:?????; Viral primary envelope fusion with host outer nuclear membrane

**HI:** Biological process: Egress??; Viral primary envelope fusion with host outer nuclear membrane.

**RU:** OC: Viruses.

**CA:** Biological process.

//

**ID:** Viral ionic channel

**AC:** KW-XXXX

**DE:** Viral protein that forms ion channel in the virion envelope. Influenza virus envelope for example, a viral pH-gated proton opens in response to the low endosomal pH and allows proton influx. Virion acidification triggers the dissociation of the viral genome from the matrix proteins and might facilitate the release the viral genome to the cytoplasm.

**GO:** GO:?????; Viral ion channel activity

**HI:** Molecular function: Ionic channel; Viral ionic channel.

**RU:** OC: Viruses.

**CA:** Biological process.

//

**ID:** Host cell receptor for virus entry

**AC:** KW-XXXX

**DE:** Cell surface protein used by a virus as an attachment and entry receptor. In some cases, binding to a cellular receptor is not sufficient for infection: an additional cell surface molecule, or coreceptor, is required for entry. Some viruses are able to use different receptors depending on the target cell type.

**SY:** Viral receptor activity.

**GO:** GO:?????; Host cell receptor for virus entry

**HI:** Molecular function: Receptor; Host cell receptor for virus entry.

**CA:** Molecular function.

//

**KW A MODIFIER**

**FROM:**

**ID:** Suppressor of RNA silencing.

**AC:** KW-0941

**DE:** Protein which suppresses host RNA-mediated gene silencing. The most common form of RNA-mediated gene silencing is RNA interference (RNAi), a sequence-specific RNA-degradation mechanism that operates as a natural antiviral system in plants and invertebrates cells. RNAi is mediated by small interfering RNAs (siRNA) of about 21- to 25-nt that target homologous RNAs for destruction. RNA silencing by endogenous micro-RNAs (miRNAs) may also play a role in the antiviral defences of mammals. miRNAs differ from siRNAs in that they generally base pair imperfectly with target RNAs and inhibit their translation by an unknown mechanism.
Protein which suppresses host RNA-mediated gene silencing. The most common form of RNA-mediated gene silencing is RNA interference (RNAi), a sequence-specific RNA-degradation mechanism that operates as a natural antiviral system in plants and invertebrates cells. RNAi is mediated by small interfering RNAs (siRNA) of about 21- to 25-nt that target homologous RNAs for destruction. RNA silencing by endogenous micro-RNAs (miRNAs) may also play a role in the antiviral defences of mammals. miRNAs differ from siRNAs in that they generally base pair imperfectly with target RNAs. Viral suppressor of RNA silencing (VSRs) have been identified in almost all plant virus genera, and also in some animal viruses. They are often multifunctional and play important roles in viral replication, coating, movement, and pathogenesis, in addition to suppressing host RNA silencing-based antiviral immunity. VSRs suppress RNA silencing pathways mainly through dsRNA binding to sequester small RNA duplexes or through interaction with and inhibition of components of the host RNA-induced silencing complex (RISC) machinery.

Modifications:
FROM:
ID   Envelope protein.
AC   KW-0261
TO:
ID   Viral envelope protein.
AC   KW-0261
-> ca necessite un log file

FROM:
ID   RNA-directed RNA polymerase.
AC   KW-0696
DE   Enzyme (EC 2.7.7.48) which synthesizes (+)RNA on a (-)RNA template.
DE   They are encoded by many viruses.
TO:
ID   RNA-directed RNA polymerase
AC   KW-0696
Enzyme (EC 2.7.7.48) which synthesizes RNA using RNA as a template. This enzyme activity is necessary for the viral genome replication and transcription of most RNA viruses.

SY RdRP.

KW ‡ DELETER (suggestion):

Phage recognition supperflu, cf = a particular type of "Viral attachment to host cell"

Fiber protein

Hexon protein

Hexon-associated protein

core protein