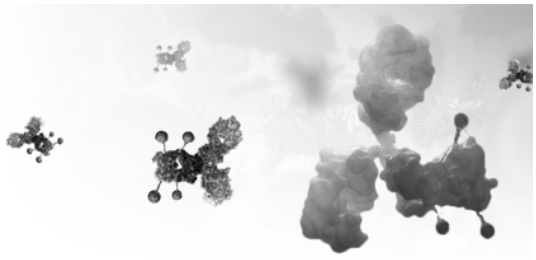

Recombinant HIV type 1 (Clade B) Gag Protein [His] (DAG2006)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview	C-terminal 6xHis tagged HIV-1 Gag(calde B) protein
Antigen Description	The Gag protein is the major structural protein required for virus assembly. It is synthesized as a polyprotein in the cytosol of an infected cell, and contains four functional segments; Matrix (MA), Capsid (CA), Nucleocapsid (NC), and p6. The NC region is flanked by two "spacer" segments, denoted SP1 and SP2. The polyprotein is all alpha helical, except the NC region, which is composed of two RNA interacting zinc knuckle domains. Gag is often referred to as an "assembly machine" because expression of Gag alone is sufficient to produce budding virus-like particles (VLP's), due to multimerization of roughly 2000 Gag molecules per virion. Gag is cleaved by the protease at multiple sites. The GAG proteins play important roles throughout the viral life-cycle, including the assembly and release of viral particles, their subsequent maturation into infectious virions, and during the events occurring between the release of capsids into newly infected cells and the integration of proviral DNA. During the early steps of the viral life cycle, viral proteins, especially capsid (CA), are in intimate contact with the intracellular environment. Considerable evidence supports the idea that interactions between host cellular proteins and the viral capsid are important for events occurring early in infection, such as the transport of the preintegration complex, uncoating of the capsid, nuclear entry, and integration Gag capsid (CA) protein can markedly reduce viral fitness, and interactions of CA with host proteins such as cyclophilin A (CypA) and TRIM5alpha can have important effects on viral infectivity.
Species	HIV
Purity	≥ 90%
Conjugate	His
Applications	WB standard, antibody ELISA, etc
Format	Each vial contains 100 µg of lyophilized protein in 500mM NaCl, 50mM Phosphat buffer (pH

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	7.4), 200mM Imidazole, 8M urea.
Concentration	1 mg/ml
Size	100 µg, 1 mg
Preservative	None
Storage	2-8°C short term, -20°C long term

BACKGROUND

Introduction	The human immunodeficiency virus (HIV) is a lentivirus (slowly replicating retrovirus) that causes the acquired immunodeficiency syndrome (AIDS), a condition in humans in which progressive failure of the immune system allows life-threatening opportunistic infections and cancers to thrive. Without treatment, average survival time after infection with HIV is estimated to be 9 to 11 years, depending on the HIV subtype. Infection with HIV occurs by the transfer of blood, semen, vaginal fluid, pre-ejaculate, or breast milk. Within these bodily fluids, HIV is present as both free virus particles and virus within infected immune cells.
Keywords	Capsid; Gag polyprotein; Matrix; Nucleocapsid; p1; p2; p6; Pr55(Gag); Pr55Gag; HIV1 Gag

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