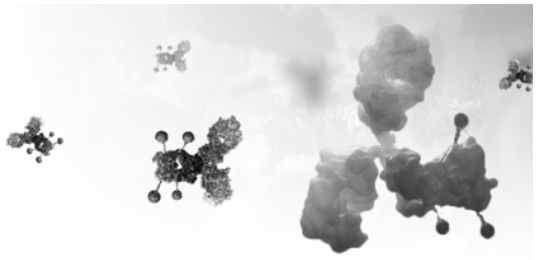

Recombinant HIV type 1 Gag Protein [His] (DAG2935)

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

PRODUCT INFORMATION

Product Overview	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
Species	HIV
Purity	> 90% pure estimated by SDS-PAGE (EU Ph. 5.0 § 2.5.31)
Conjugate	Unconjugated
Applications	SDS-PAGE, WB
Molecular Weight	55 kDa
Format	Lyophilized
Size	50 µg
Buffer	PBS
Preservative	None
Storage	Shipped at RT The lyophilized protein is stable for 24 months if stored at -20°C. The reconstituted solution has to be used immediately. Avoid freeze-thaw cycles.

BACKGROUND

Introduction	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

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(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.

Keywords	Human Immunodeficiency Virus; HIV Gag; HIV; HIV-1 Gag; HIV-1; HIV type 1 Gag

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