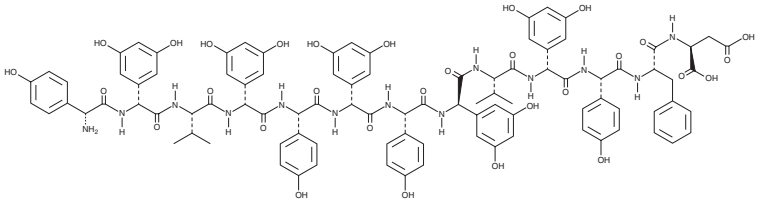
# PRODUCT INFORMATION

## Feglymycin

*Item No. 28166*

**CAS Registry No.:** 209335-49-9
**Formal Name:** (2R)-2-(4-hydroxyphenyl)glycyl-(2R)-2-(3,5-dihydroxyphenyl)glycyl-L-valyl-(2R)-2-(3,5-dihydroxyphenyl)glycyl-(2S)-2-(4-hydroxyphenyl)glycyl-(2R)-2-(3,5-dihydroxyphenyl)glycyl-(2S)-2-(4-hydroxyphenyl)glycyl-(2R)-2-(3,5-dihydroxyphenyl)glycyl-L-valyl-(2R)-2-(3,5-dihydroxyphenyl)glycyl-(2S)-2-(4-hydroxyphenyl)glycyl-L-phenylalanyl-L-aspartic acid
**MF:** $C_{95}H_{97}N_{13}O_{30}$
**FW:** 1,900.9
**Purity:** ≥95%
**Supplied as:** A solid
**Storage:** -20°C
**Stability:** ≥4 years
**Item Origin:** Bacterium/*Streptomyces* sp.



*Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.*

### Laboratory Procedures

Feglymycin is supplied as a solid. A stock solution may be made by dissolving the feglymycin in the solvent of choice, which should be purged with an inert gas. Feglymycin is soluble in ethanol, methanol, DMSO, and dimethyl formamide.

### Description

Feglymycin is a 13-amino acid peptide originally isolated from *Streptomyces* that has antibacterial and antiviral activities.[1] It is active against Gram-positive bacteria (MICs = 32-64 µg/ml) and inhibits HIV viral replication in H9 cells ($IC_{50}$ = ~5 µM). Feglymycin is also active against clinical isolates of HIV-1 from clades A-D, A/E, and G ($EC_{50}$s = 0.5-6.7 µM).[2] It interacts with gp120 and inhibits HIV-1 NL4.3 binding to human soluble CD4 ($EC_{50}$ = 4.4 µM) and to $CD4^+$ SupT1 T cells by 74.5% when used at a concentration of 10.5 µM. Feglymycin inhibits the *E. coli* peptidoglycan biosynthesis enzymes MurA and MurC ($K_i$s = 3.4 and 0.3 µM, respectively) in a noncompetitive manner.[3]

### References


1. Vértesy, L., Aretz, W., Knauf, M., *et al.* Feglymycin, a novel inhibitor of the replication of the human immunodeficiency virus. Fermentation, isolation and structure elucidation. *J. Antibiot. (Tokyo)* **52(4)**, 374-382 (1999).
2. Férir, G., Hänchen, A., François, K.O., *et al.* Feglymycin, a unique natural bacterial antibiotic peptide, inhibits HIV entry by targeting the viral envelope protein gp120. *Virology* **433(2)**, 308-319 (2012).
3. Rausch, S., Hänchen, A., Denisiuk, A., *et al.* Feglymycin is an inhibitor of the enzymes MurA and MurC of the peptidoglycan biosynthesis pathway. *Chembiochem* **12(8)**, 1171-1173 (2011).





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