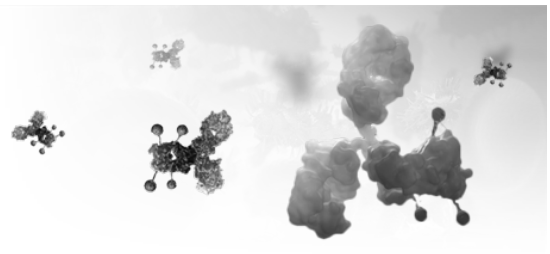

Apramycin [KLH] (DAG4479)

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

PRODUCT INFORMATION

Product Overview	Apramycin, KLH-conjugate
Antigen Description	The apramycin sulfate and KLH (keyhole limpet hemocyanin) (10 mg each) are conjugated by EDC method in 0.1 M MES pH 5.0. One or more of the four amine groups in the apramycin are directly linked to carboxyl group(s) in the KLH without any linker by EDC conjugation method. Given the molecular weights of apramycin sulfate and KLH are 637.66Da and 8,000 – 9,000 kDa, respectively, the molar ratio of apramycin:KLH in the conjugation solution is 12546 - 14114:1. The resultant conjugation solution is then buffer-exchanged with 20 mM PBS, pH 7.4. The number of apramycin that is actually conjugated to each KLH molecule is not determined. Note: Due to its high molecular weight and its tendency to form aggregates, the conjugate is not completely soluble in the buffer that it is in. Therefore, it is strongly recommended to vigorously vortex immediately prior to aliquot or use.
Nature	Synthetic
Expression System	N/A
Species	N/A
Conjugate	KLH
Applications	Used as immunogen for the generation of anti-apramycin antibodies. The apramycin, KLH-conjugate has been successfully used as an immunogen in inducing apramycin specific antibodies in mice.
Procedure	None
Format	Liquid
Concentration	Approximately 2.0 mg/mL KLH
Size	1 mg
Buffer	Supplied in 20 mM PBS, pH 7.4
Preservative	None
Storage	Keep below -20°C for up to 1 year. Avoid repeated freeze-and-thaw. For short term storage (< 3 weeks) keep at 4°C.
Warnings	PLEASE note that this product is intended for research use only; not for diagnostic or clinical

use.

BACKGROUND

Introduction	Aminoglycosides are a family of bactericidal antibiotics that are used in the treatment of specific bacterial infections. They display a concentration dependent killing action and are active against a wide range of aerobic Gram-negative bacilli. Aminoglycosides are molecules that are comprised of an amino group and a sugar group. They operate by inhibiting the bacteria from producing proteins vital to its growth. More specifically, they bind to the bacterial 30S ribosomal subunit where they prevent the translocation of the peptidyl-tRNA from the A-site to the P-site, subsequently giving rise to a misreading of mRNA resulting in the inhibition of protein synthesis. This consequently results in a disruption to the integrity of the bacterial cell membrane. In addition to their use to prevent bacterial infection, aminoglycosides have been used as growth promoters in food producing animals.
Keywords	Apramycin