Product Specification Sheet

Product Name	**pAAVS1-SA-T2A-Neo-CAG-MCS-SV40pA Donor Vector**
Description	Human AAVS1 donor vectors are meticulously designed to target the human AAVS1 "safe harbor" site nestled within intron 1 of the PPP1R12C gene (protein phosphatase 1 regulatory subunit 12C). This specific locus is aptly called a "safe harbor" because it exerts minimal influence on cellular functions. It excels in supporting robust transcription, making it an ideal site for maintaining the expression of an externally introduced gene while mitigating the risk of unintentional integration elsewhere. Our latest-generation donor vectors incorporate a multiple cloning site (MCS) strategically positioned downstream of a CAG promoter and upstream of a poly-A tail. This arrangement ensures a streamlined and straightforward path to achieve enduring and strong expression of the Gene of Interest (GOI). Furthermore, leveraging the intronic location of the AAVS1 safe harbor locus, the Neomycin selection marker is thoughtfully integrated with a splice acceptor (SA) site, devoid of its own promoter. This design guarantees that neomycin-resistant gene expression can only occur when the construct integrates within an intron. Consequently, neomycin-resistant gene expression becomes intricately linked to the PPP1R12C transcript, significantly reducing the risk of unintended off-target integrations when employing G418 selection. The pAAVS1-SA-T2A-Neo-CAG-MCS-SV40pA vector plays a pivotal role in the ALSTEM pAAVS1/Cas9 Knock-In vector system. It facilitates robust expression of a GOI through the utilization of the CAG promoter and incorporates the convenient Neomycin selection marker for ease of screening. When used in conjunction with the SpCas9 nuclease and gRNA expression vector, it enables the seamless integration of the GOI into the AAVS1 safe harbor site, simplifying the process of enhanced GOI expression.
Catalog Number	AC2302
Size	10 µg at 0.5 µg/µL in TE
Shipping	Room temperature
Storage and Stability	Store at -20°C immediately upon receipt. This product is stable for 6 months when stored as directed.
Quality Control	This plasmid is sequence verified.
Safety Precaution	This product does not contain any hazardous materials with occupational exposure limits. Nevertheless, ALSTEM strongly advises anyone handling this product to use

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suitable protective eyewear, such as chemical safety goggles or protective glasses, along with gloves and appropriate clothing to prevent skin contact.

Restricted Use For Research Use Only. Not for use in diagnostic or therapeutic procedures.

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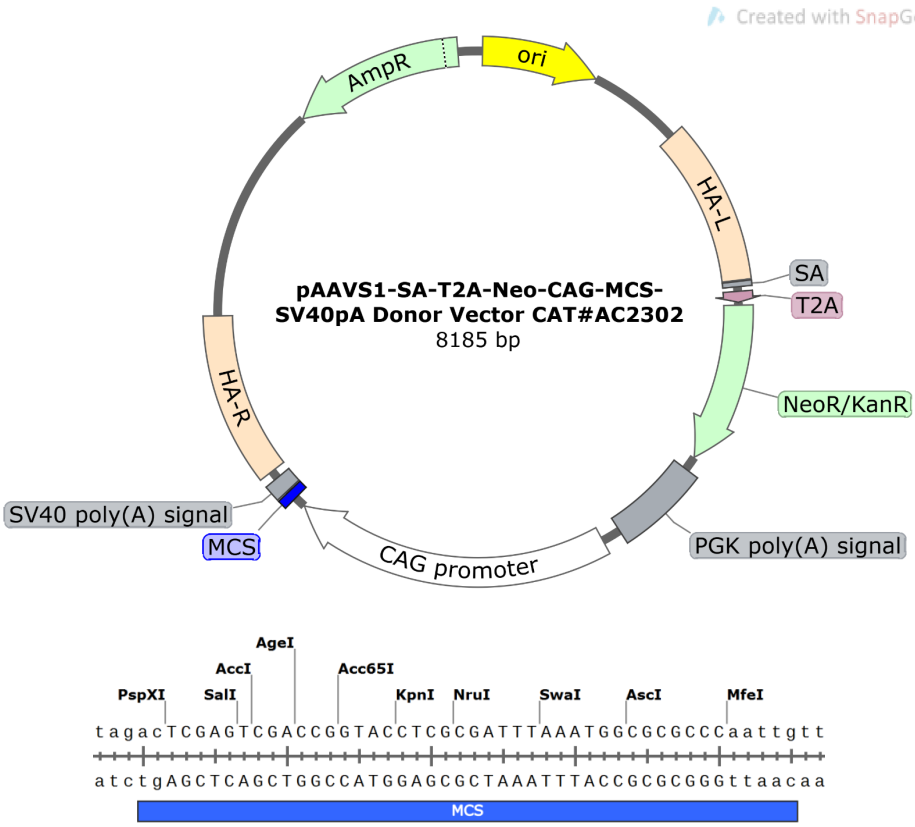
Vector Information

This is a AAVS1 donor vector that contains the necessary elements for introducing a GOI (gene of interest) to AAVS1 Safe Harbor site. A ubiquitous SA-T2A-NeoR cassette ensures the intergration of GOI in AAVS1 safe harbor sites by antibiotic selection. The CAG promoter drives the expression of the GOI. This vector can be used for stable cell line generation.



Note: Bacterial culture of AAVS1 vectors should be done in medium containing ***100 µg/mL*** *Carbenicillin. For maximal plasmid yield and quality, we recommend Stbl3 competent cells (Invitrogen).*

IMPORTANT NOTICE

Store the vial at -20°C immediately upon receipt.

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