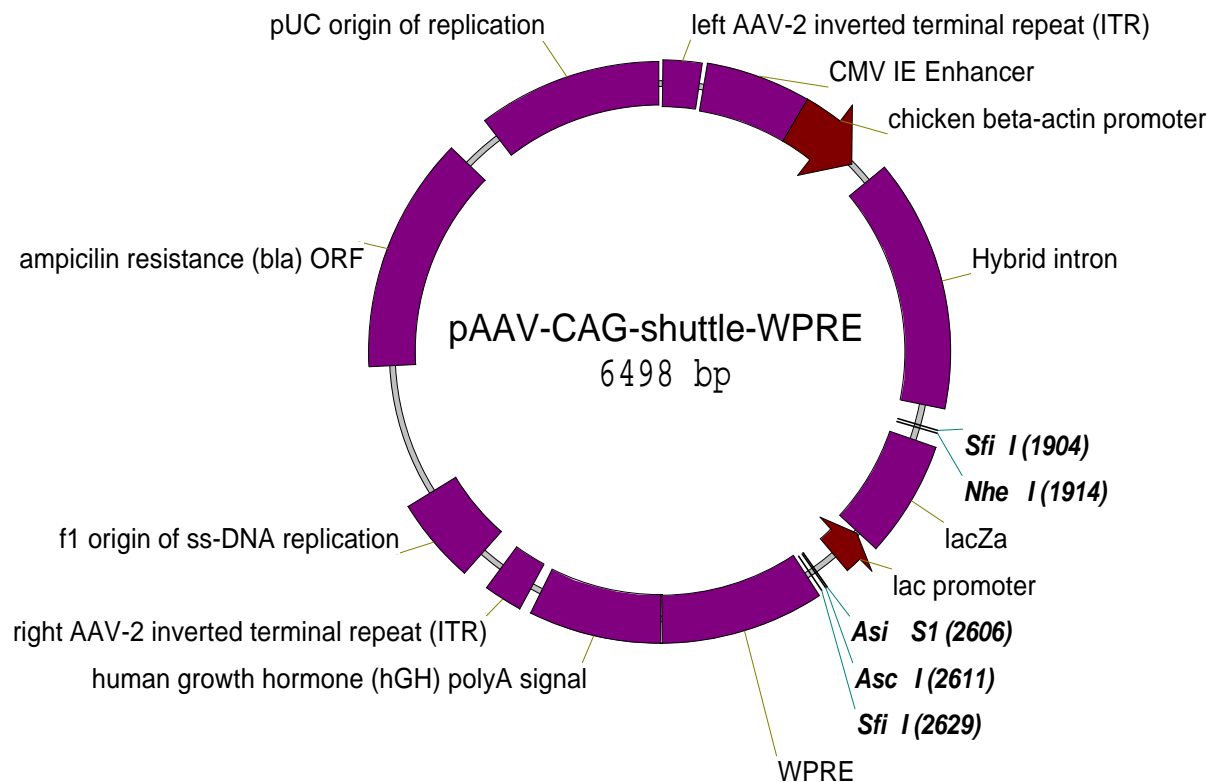


## pAAV-CAG-shuttle-WPRE

Catalog Number: 0916



Left ITR: 1-141

CMV IE enhancer: 160-538

Chicken  $\beta$ -actin (CAG) promoter: 539-816

Hybrid intron: 905-1823

LacZ $\alpha$  cassette (complementary): 1964-2511 (including lac promoter and lacZ $\alpha$ )

Woodchack post-transcriptional regulatory element (WPRE): 2645-3236

Human growth hormone poly-A: 3243-3721

Right ITR: 3761-3901

f1 origin: 3993-4299

ampicillin resistance (bla) ORF: 4818-5672

pUC origin of replication: 5826-6493

**Note:**

1. The Woodchack post-transcriptional regulatory element (WPRE) confers better processing and even longer stability of mRNA, thus enhancing gene expression. It has been reported that WPRE leads to 5-10 fold higher protein expression both in vitro and in vivo when inserted in adeno-, AAV-, and retro/lenti- viral vectors.
2. lacZ $\alpha$  expression cassette provides convenient blue-white selection when subcloning transgene insert behind CAG promoter. Bacterial strains that complement lacZ $\alpha$  function such as DH5 $\alpha$  or DH10B should be used.
3. Transgene can be cloned between Nhe I site at 5' and either Asc I or Asi SI site at 3'.
4. Detail of Sfi I subcloning sites:

```
( 1893 )                               ( 2601 )  
5' -AAGGGCCAGAG AGGCCGCTAGCG . . . GCGATCGCGGCGCGCCGGCCTCTC TGGCTC  
3' -TTGCCCGGT CTCTCCGGCGATCGC . . . CGCTAGCGCCGCGCGGCCGGA GAGACCGAG  
      5'- Sfi I site                    Asi SI site                    3'- Sfi I site
```

5. Above Sfi I sites can be used to subclone blunt-ended fragment. Such fragment can be first ligated with Sfi I adaptors, then ligate with Sfi I-digested 5773bp fragment of the shuttle plasmid. Please contact Applied Viromics for detail.