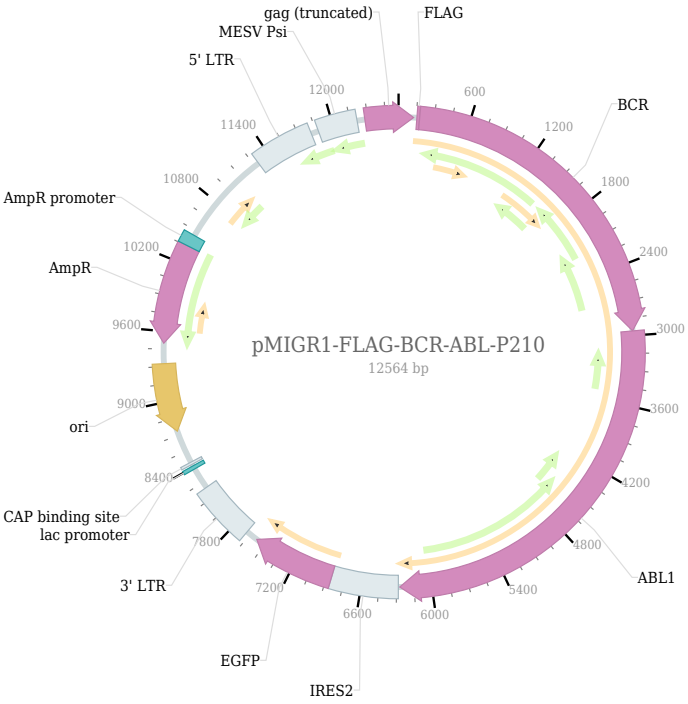
pMIGR1-FLAG-BCR-ABL-P210

Vector ID	V013619
Antibiotic Resistance	Ampicillin
Length	12564 bp
Vector Type	Protein expression
Host	Mammalian cells, Retrovirus

Product Information

Replication Origin	ori
Copy Number	High copy number
Promoter	MESV
Growth Strain(s)	Stbl3
Growth Temperature	37℃
Comment	p210 BCR-ABL1: The most common and classic fusion isoform of BCR-ABL1, generated by the b2a2 or b3a2 fusion of BCR and ABL1 genes. It is the primary molecular driver of chronic myeloid leukemia (CML) across all phases (chronic, accelerated, blast crisis), and also associated with a small subset of adult acute lymphoblastic leukemia (ALL). The p210 protein has robust constitutive tyrosine kinase activity, which dysregulates myeloid cell proliferation, differentiation and apoptosis, leading to clonal myeloproliferative disorder. p190 BCR-ABL1: A shorter fusion isoform encoded by the e1a2 BCR-ABL1 fusion variant, with a molecular weight of ~190 kDa. It is the dominant isoform in pediatric and adult B-cell acute lymphoblastic leukemia (B-ALL), and occasionally detected in rare CML cases with lymphoid blast crisis. Compared with p210, p190 shows stronger cytoplasmic localization and more potent transforming activity in lymphoid progenitor cells, which is closely linked to the lymphoid lineage malignant transformation of hematopoietic stem cells. p230 BCR-ABL1: A rare large fusion isoform derived from the e19a2 BCR-ABL1 fusion, with a molecular weight of ~230 kDa. It is predominantly associated with chronic neutrophilic leukemia (CNL) and a small number of atypical chronic myeloid leukemia (aCML) cases, and rarely found in classic CML or ALL. The p230 isoform drives the clonal proliferation of mature neutrophilic granulocytes, leading to persistent peripheral blood neutrophilia and bone marrow granulocytic hyperplasia, with relatively indolent clinical behavior compared to p210 and p190.

Vector Map



Plasmid Resuspension Protocol

1. Centrifuge at 5,000×g for 5 min.
2. Carefully open the tube and add sterile water to dissolve the DNA: add 20 µl for 5 µg plasmid, and 100 µl for 100 µg plasmid.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin to concentrate the liquid at the bottom. Speed is less than 5000×g.
5. Store the plasmid at -20 ℃.