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## Rat MMP12 CRISPR gRNA + Cas9 in Lenti Particles

Overview	
Quantity:	300 μL
Gene:	MMP12
Species:	Rat
Insert:	gRNA + Cas9
Vector:	Lentiviral Vector
Application:	Protein Expression (PExp), Genome Editing with Engineered Nucleases (GEEN)
Product Details	
Purpose:	Individual gRNA against Mmp12 in Lentiviral Particles with a Titer of >1x10e7 IU/mL. (sgRNA and Cas9 in a single vector)
Vector Backbone:	pLenti-U6-sgRNA-SFFV-Cas9-2A-Puro
Promoter:	U6 Promoter, SFFV Promoter
Selectable Marker:	Puromycin
Bacterial Resistance:	Ampicillin
Expression Type:	Stable, Transient
Sequence:	Sequence available upon placing order
Specificity:	GRNAs are designed for use with Cas9 Nuclease only.  Cas9 Nuclease is under the control of the SFFV promoter which should work for a vast majority of cells, except ES cells or iPS cells.
Sequencing Primer:	U6 Forward Primer: 5'TACGTCCAAGGTCGGGCAGGAAGA3'
Components:	Lentiviral particles with an individual gRNA (300 $\mu$ L) for a specific sequence of Mmp12

## **Target Details**

Gene:	MMP12
Alternative Name:	Mmp12 (MMP12 Products)
NCBI Accession:	NM_053963

Application Details		
Application Notes:	Recommended for quality control: Restriction Enzyme Digest and Sequencing	
Restrictions:	For Research Use only	
Handling		
Format:	Viral Particles	
Storage:	-80 °C	
Expiry Date:	12 months	
Publications		
Product cited in:	Johnson, Drugan, Miller, Evans: "38" in: , Vol. 1363, Issue Nucleic acids research, pp. 28-39, (	

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1991)