

Proteins Class	Gene	Mutation	Mutation Frequency	
			2015 Strains	2023 Strains
Non Structural proteins	NSP1	P57S**	0%	100%
		I313L***	100%	100%
		V153A*	100%	0%
		S259T	0%	16,67%
		V565A***	100%	100%
		N580S***	100%	100%
	NSP2	T648N	37,50%	0%
		A674V	0%	58,33%
		T192I***	100%	100%
		P367L*	100%	0%
		N385S***	100%	100%
		E438V***	100%	100%
	NSP3	L461P***	100%	100%
		T509I	12,50%	0%
		T72M***	100%	100%
		A462T	0%	8,33%
		S591C***	100%	100%
		I603V**	0%	100%
	C	A55T*	100%	0%
		N79K*	100%	0%
P92L*		100%	0%	
I167V		0%	8,33%	

	E3	-	-	-
<b>Structural proteins</b>		M92T***	100%	100%
	E2	H147Q	0%	16,67%
		S380T***	100%	100%
	6K	-	-	-
	E1	I280V	0%	8,33%
		V342A***	100%	100%

\* *Unique to 2015 Strains*

\*\* *Unique to 2023 Strains*

\*\*\* *Shared by 2015 and 2023 Strains*