

3.2.S.1.2 STRUCTURE {CX-031302}

3.2.S.1.2.1 Molecular Sequence

The B.1.1.529 or Omicron variant has emerged recently in South Africa and is currently circulating globally and was designated as a Variant of Concern on November 26, 2021. B.1.1.529 has multiple mutations in the S-protein including several that increase the likelihood of transmissibility and cause a reduction in susceptibility to neutralization. The mutations in the S protein of the B.1.1.529 variant include some, or all, among: A67V, Δ69-70, T95I, G142D/Δ143-145, Δ211/L212I, ins214EPE, G339D, S371L, S373P, S375F, K417N, N440K, G446S, S477N, T478K, E484A, Q493R, G496S, Q498R, N501Y, Y505H, T547K, D614G, H655Y, N679K, P681H, N764K, D796Y, N856K, Q954H, N969K, and L981F. Moderna has designed mRNA-1273.529 containing CX-031302 which encodes for the S-2P of B.1.1.529.

CCI
 [Redacted]

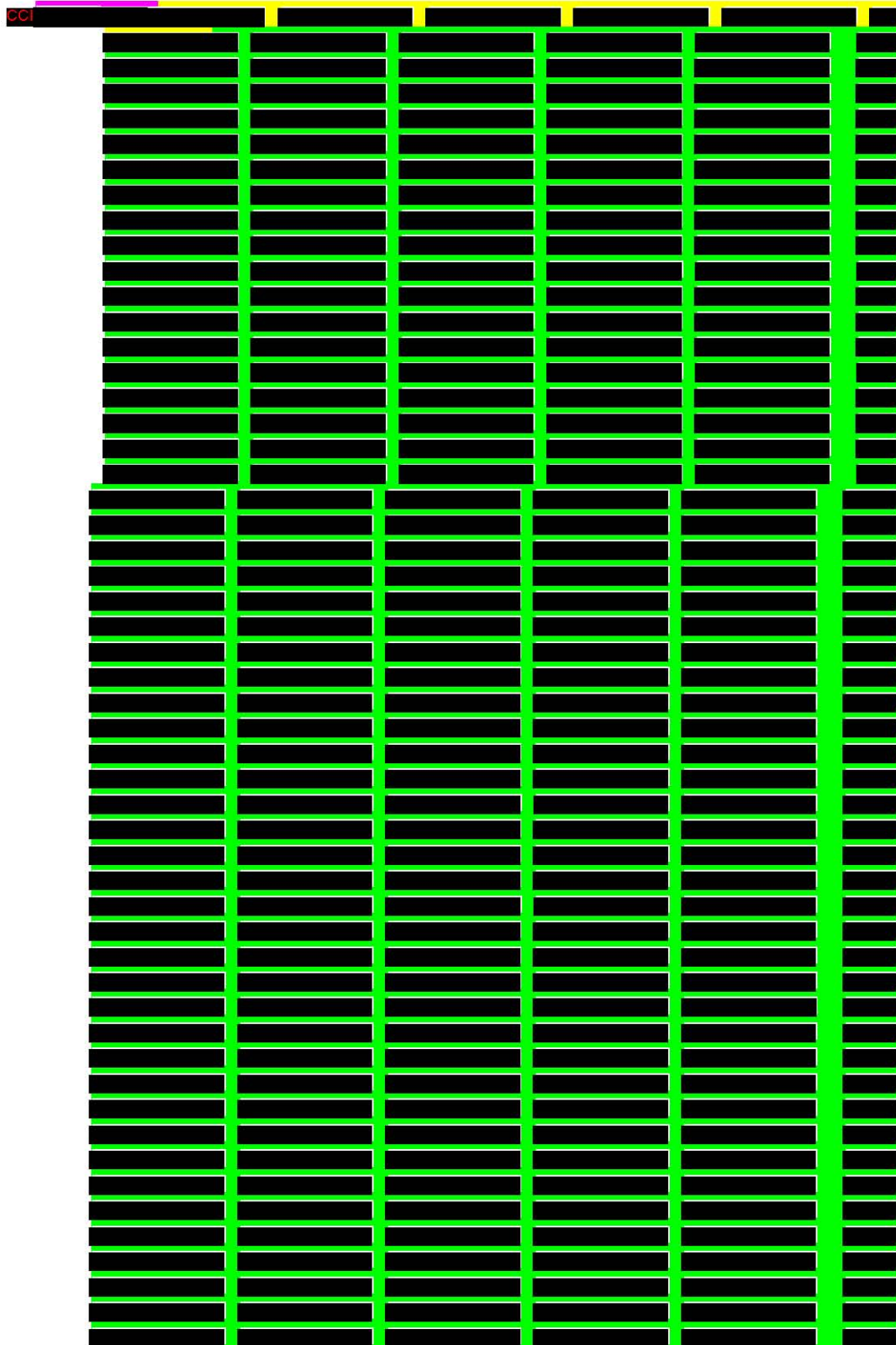
Table 1: Structural Overview of CX-031302

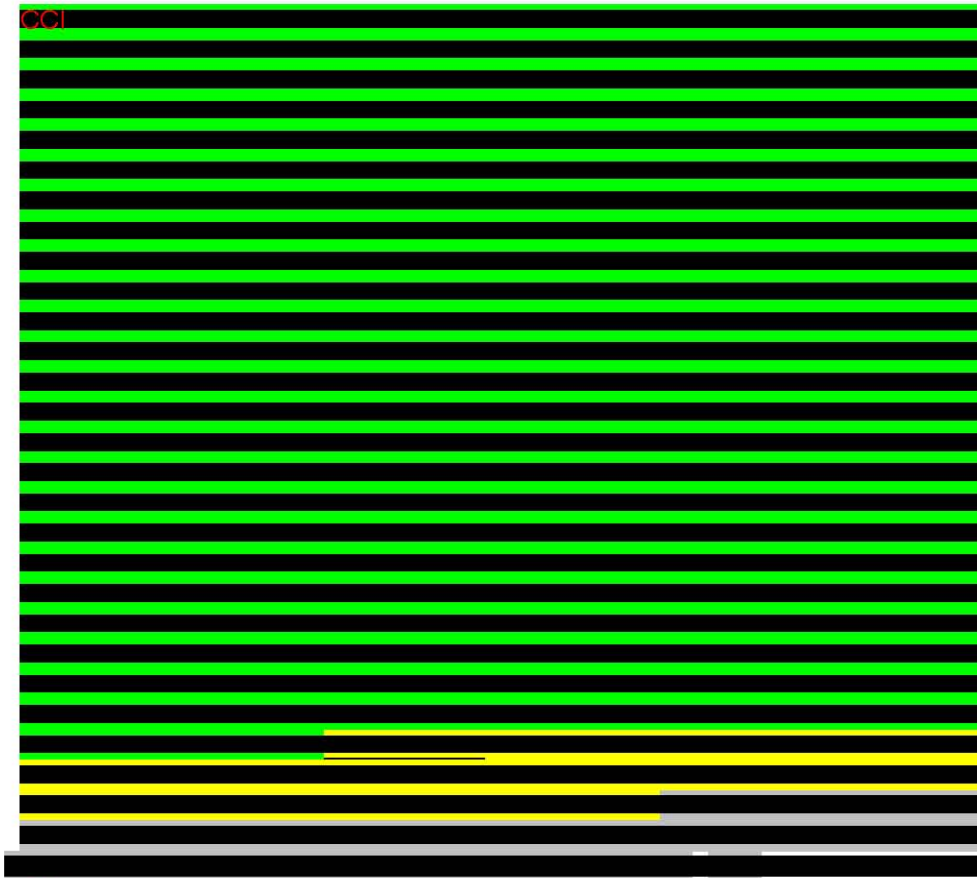
mRNA Sequence Molecular Weight (free acid)	CCI [Redacted]	
mRNA Sequence Molecule Length	CCI [Redacted]	
mRNA Sequence Elements	ORF:	CCI [Redacted]
	5' UTR:	CCI [Redacted]
	3' UTR:	CCI [Redacted]
	PolyA tail:	CCI [Redacted]

Abbreviations: ORF = open reading frame; UTR = untranslated region

Figure 1: Full mRNA Sequence of CX-031302

Nucleotide Sequence (50 nucleotides per line, blocks of 10 with numbering at the end of each line):





Where: CCI [redacted]
 [redacted]

Table 2: CCI [redacted]

Element	Description	Position
Cap	CCI [redacted]	[redacted]
5' UTR	CCI [redacted] [redacted] [redacted]	[redacted]
ORF	CCI [redacted] [redacted]	[redacted]
3' UTR	CCI [redacted] [redacted] [redacted]	[redacted]
polyA tail	CCI [redacted]	[redacted]

Abbreviations: ORF = open reading frame; UTR = untranslated region