

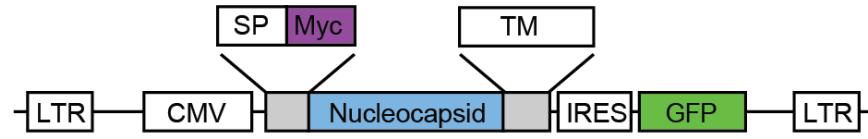
# RADx epitope mapping results

**Mologic Covios Ag**  
(Antibodies: 5B1 & 5E2)

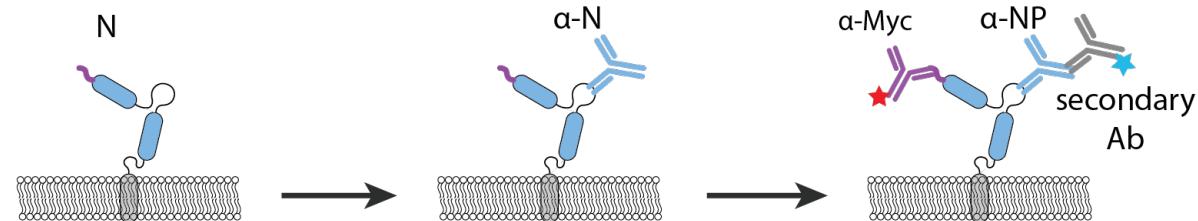
02/28/2022

# N protein construct design and detection

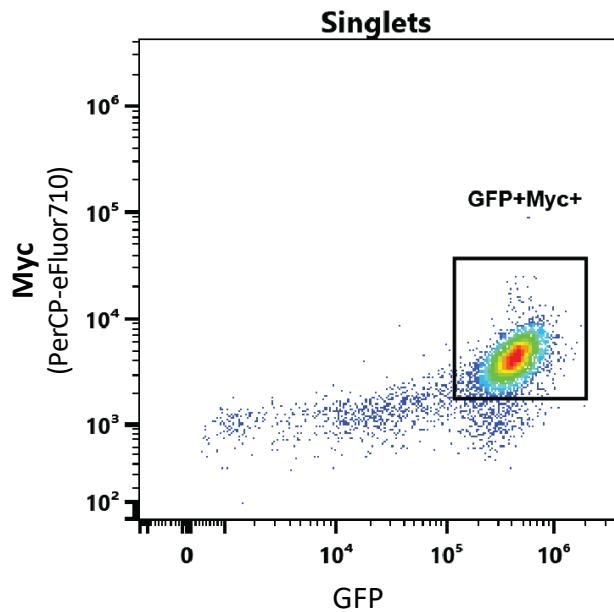
## Lentiviral expression construct:



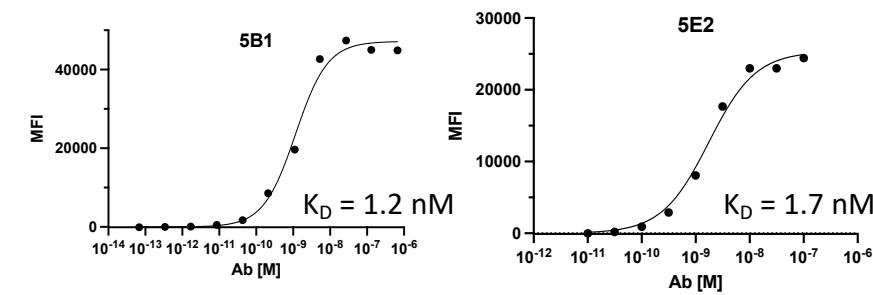
## Protein detection:



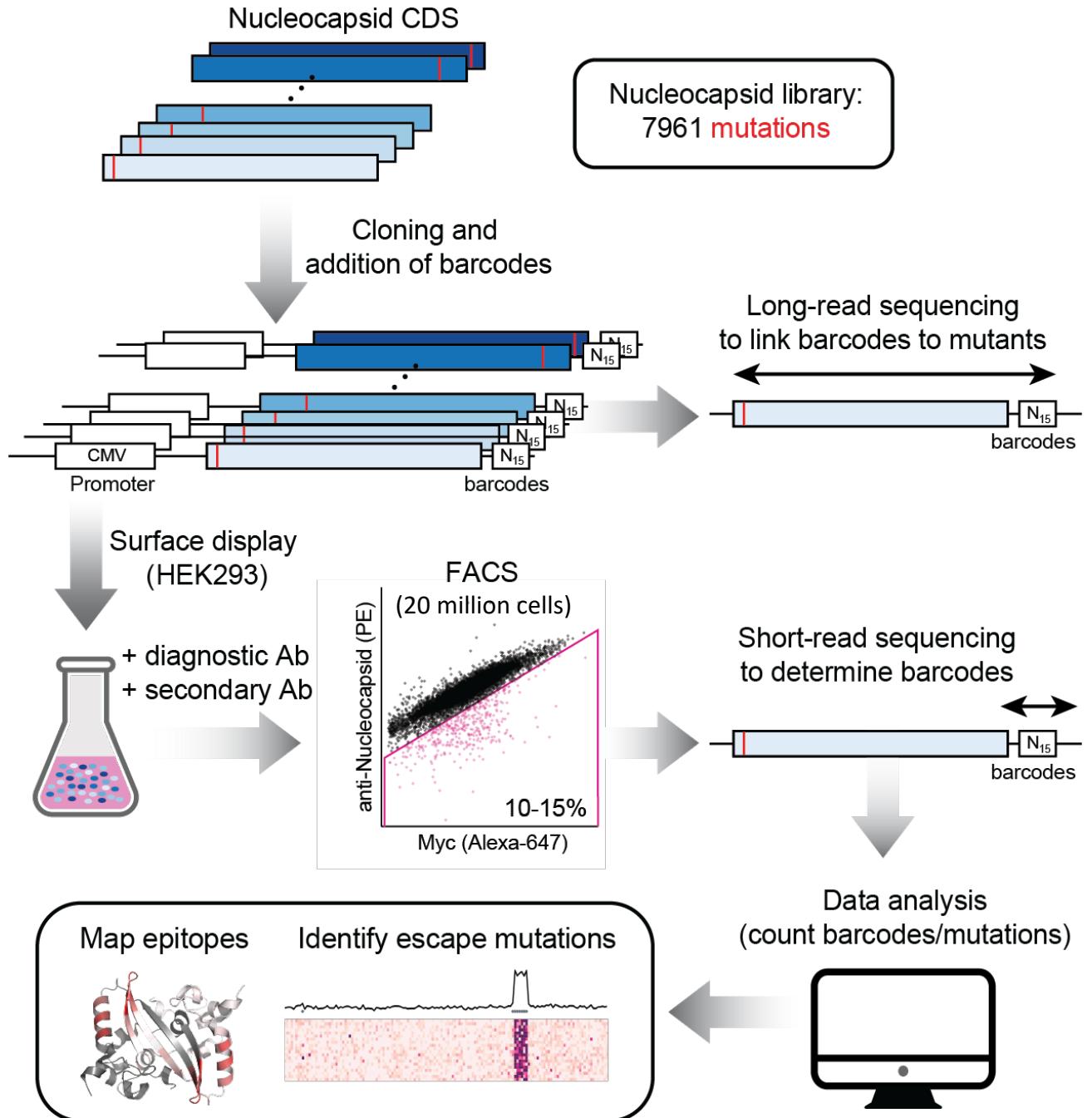
## Flow cytometry analysis (HEK293):



## Test binding to Wuhan N:

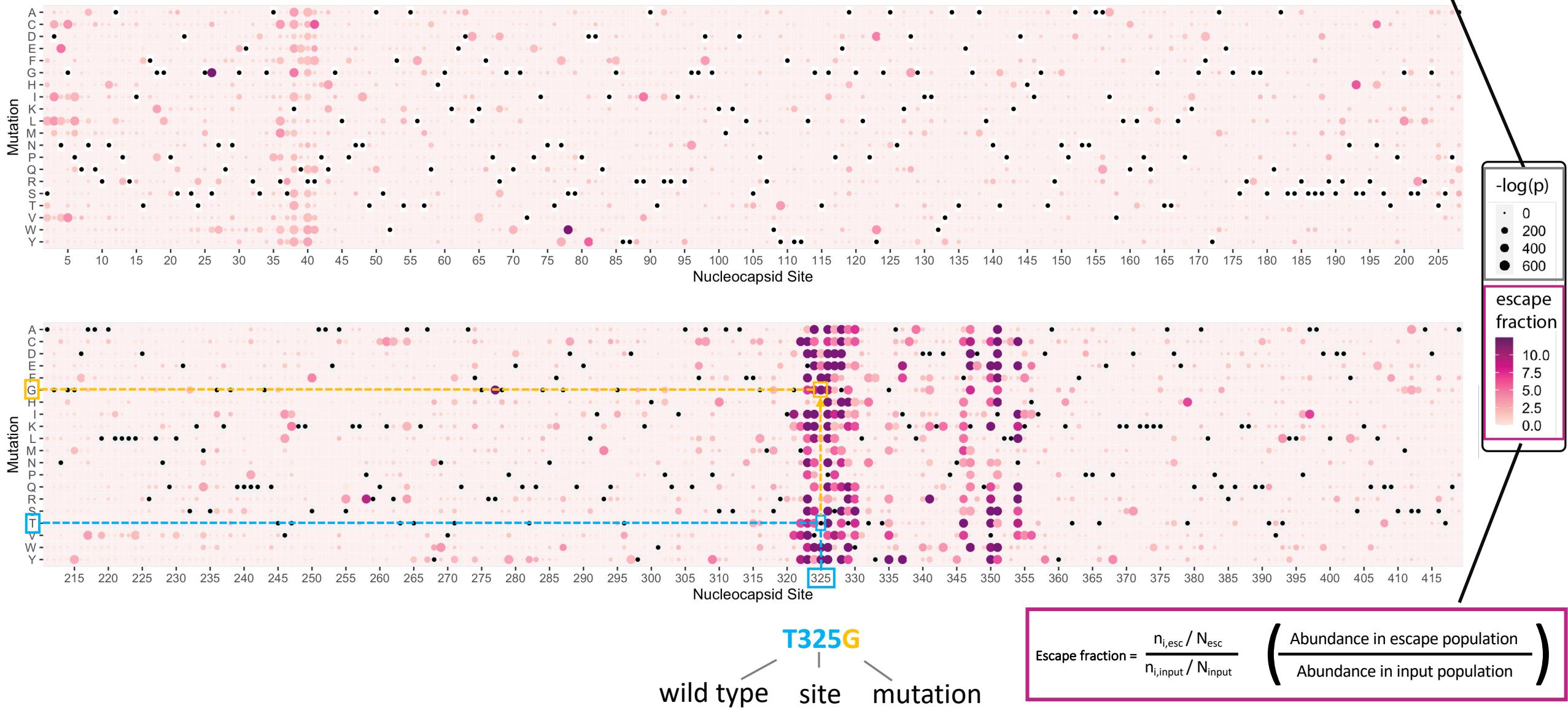


# Deep mutational screening design



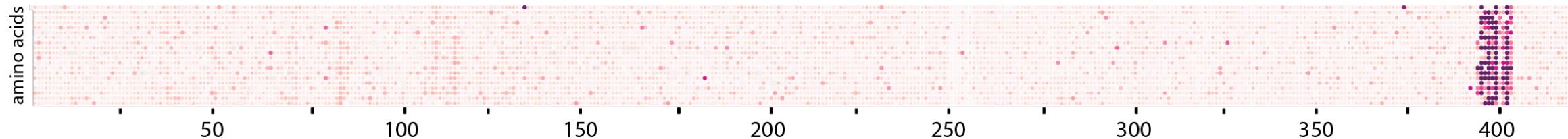
# Data visualization:

Circle size is proportional to the p value (Fisher's exact test)

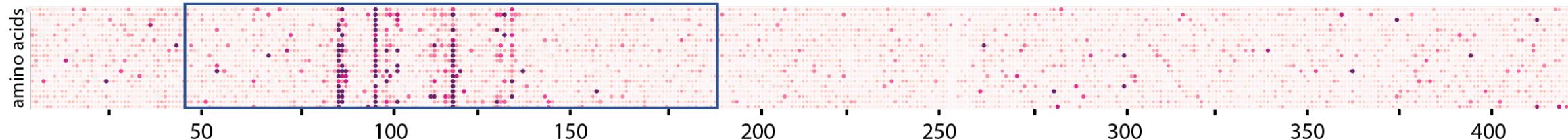


# Epitope types

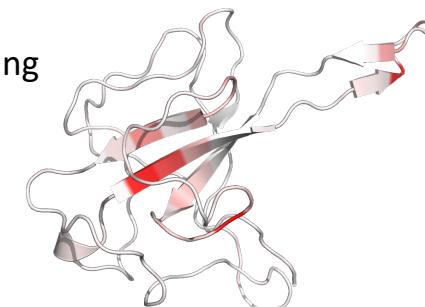
Linear epitope:



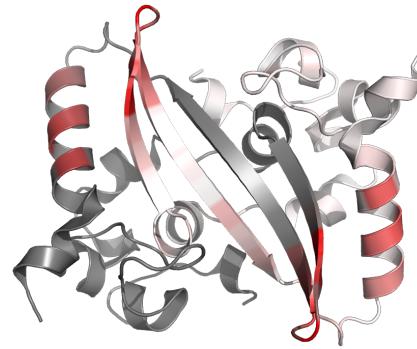
3D epitope in the RNA-binding domain:



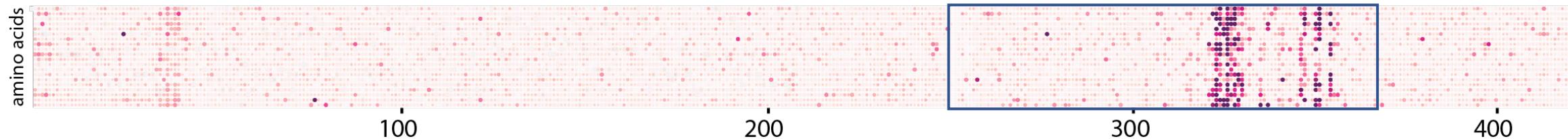
RNA-binding  
domain:



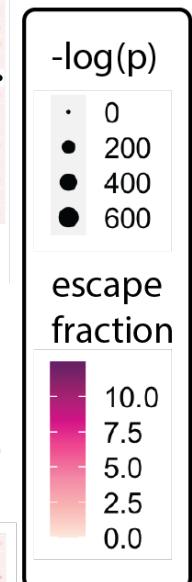
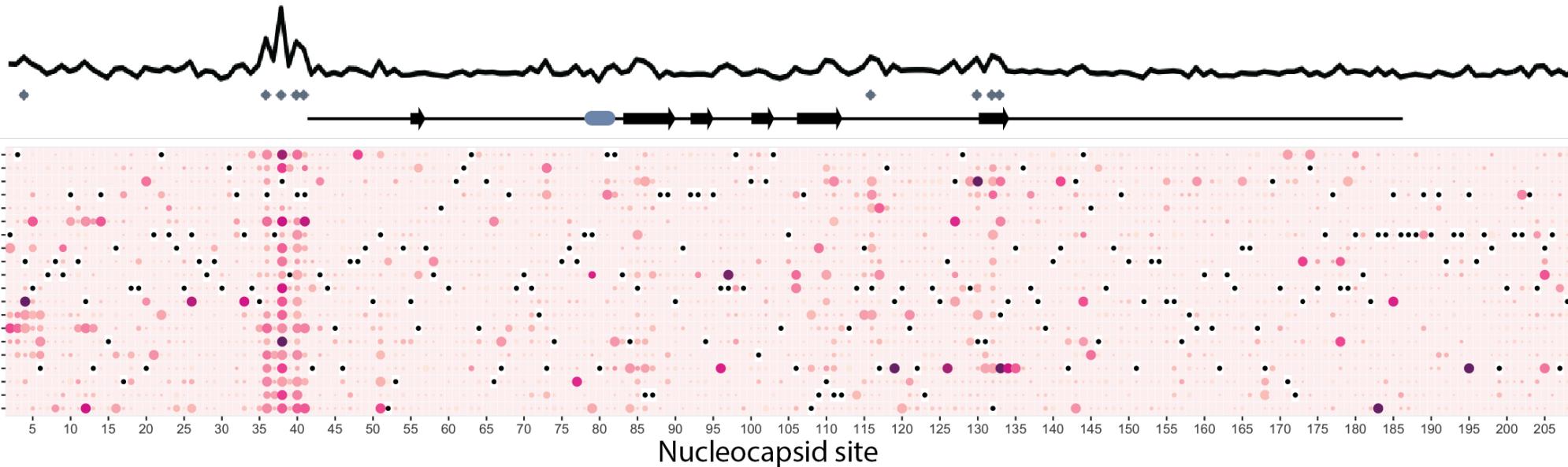
Dimerization  
domain:



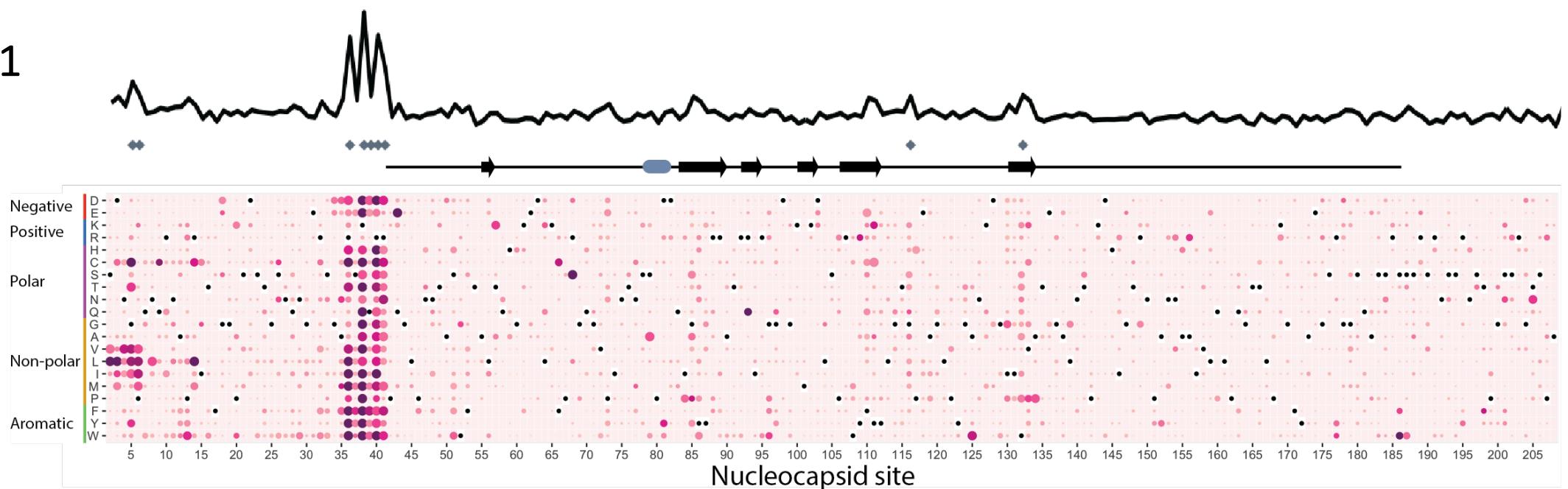
3D epitope in the dimerization domain:



5E2



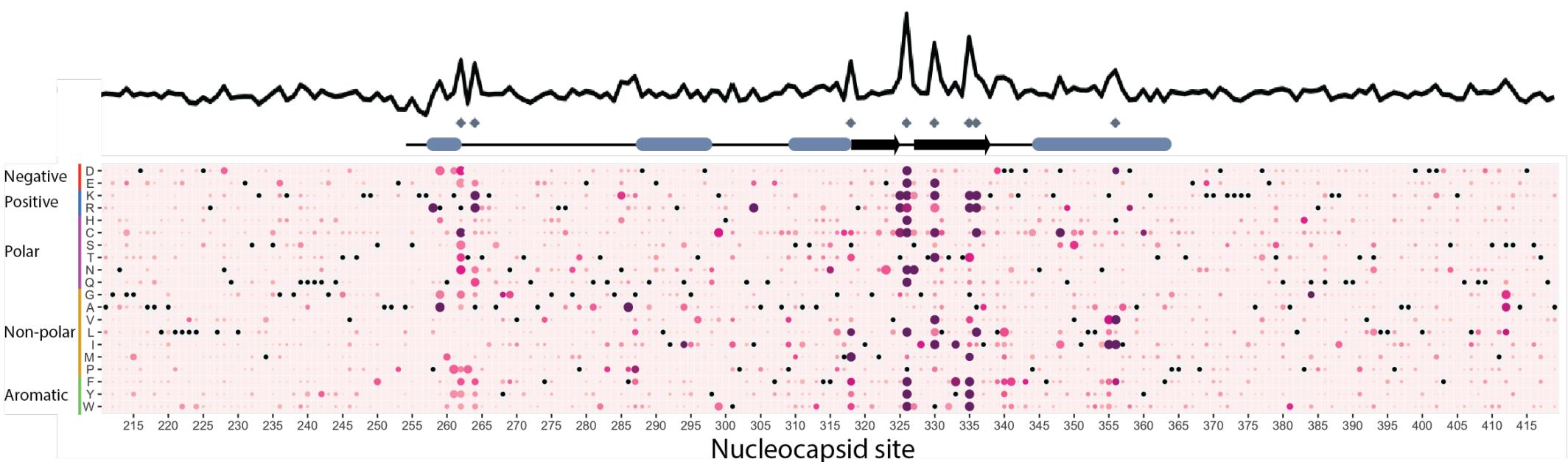
5B1

 $-\log(p)$ 

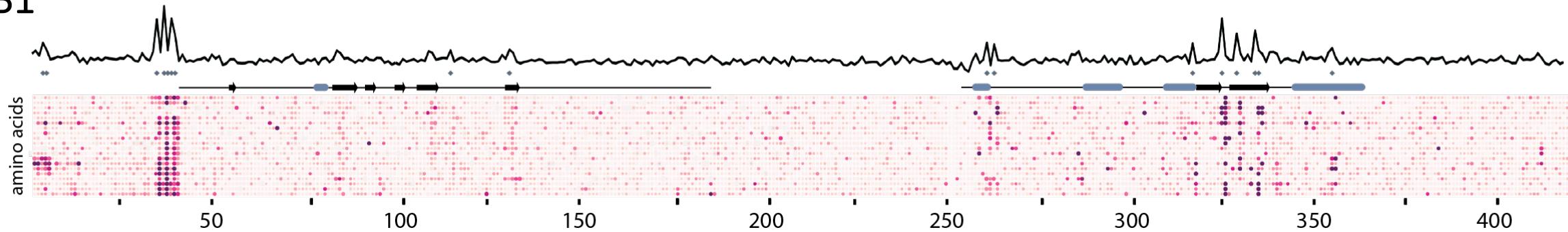
- 0
- 200
- 400
- 600

escape fraction

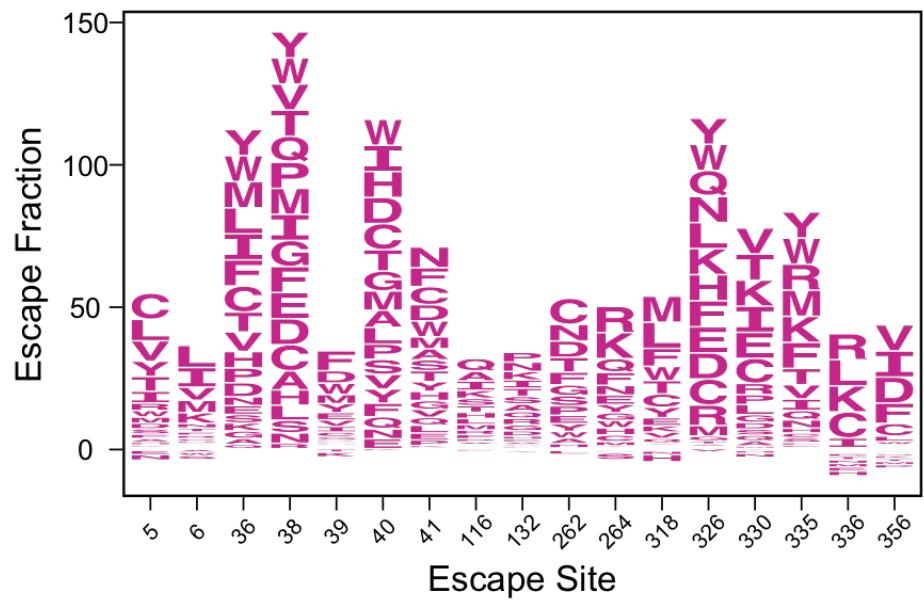
- 10.0
- 7.5
- 5.0
- 2.5
- 0.0



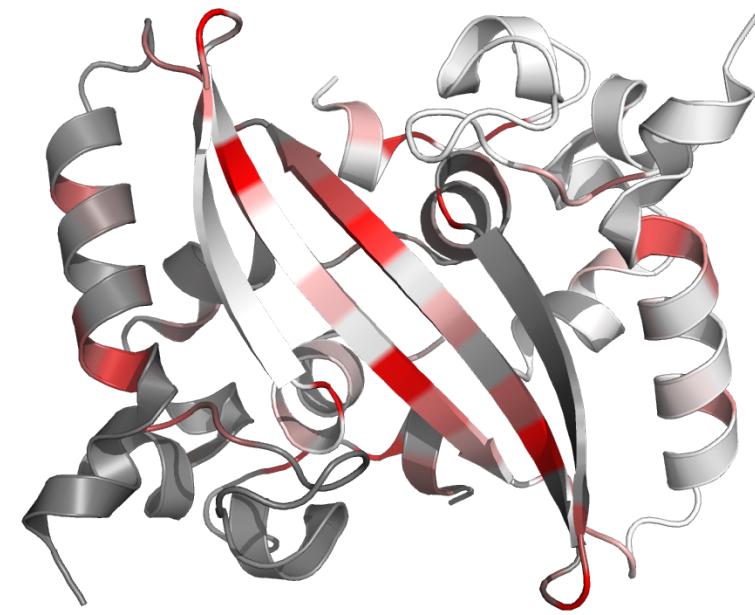
5B1



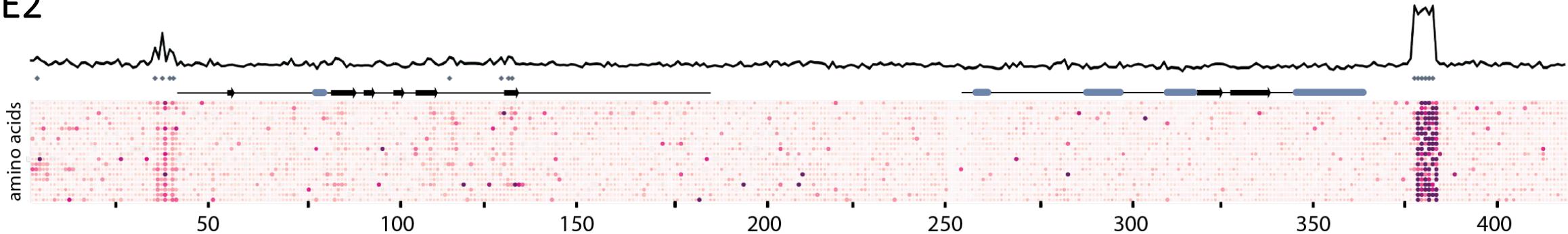
Sequence logo



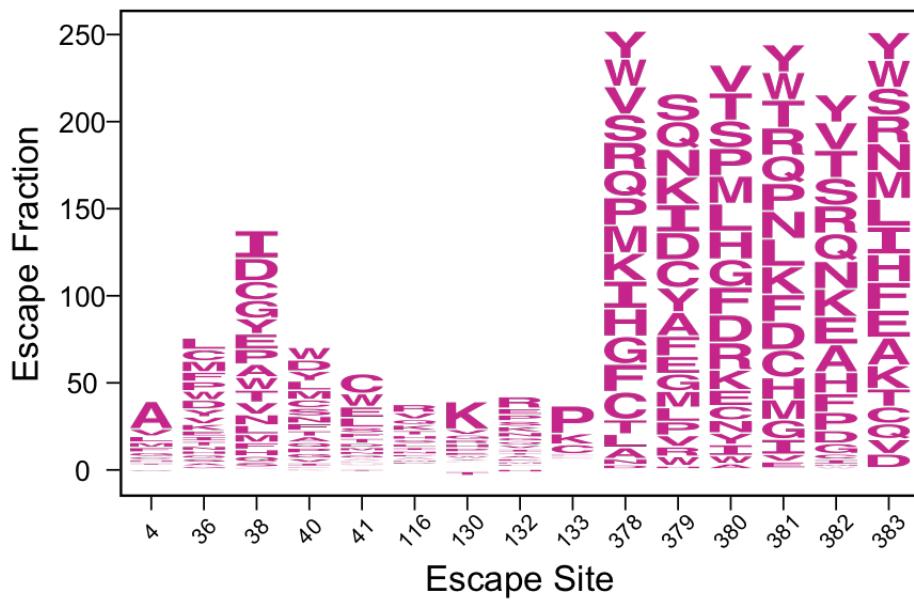
Scores mapped onto the structure:



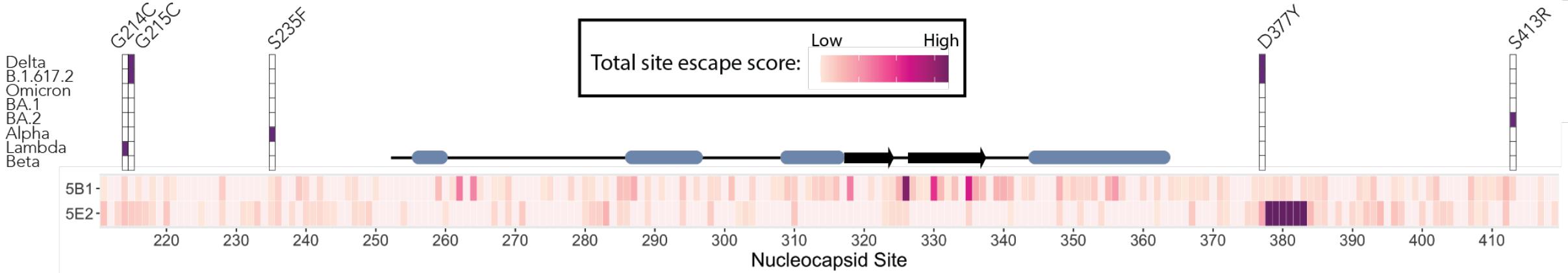
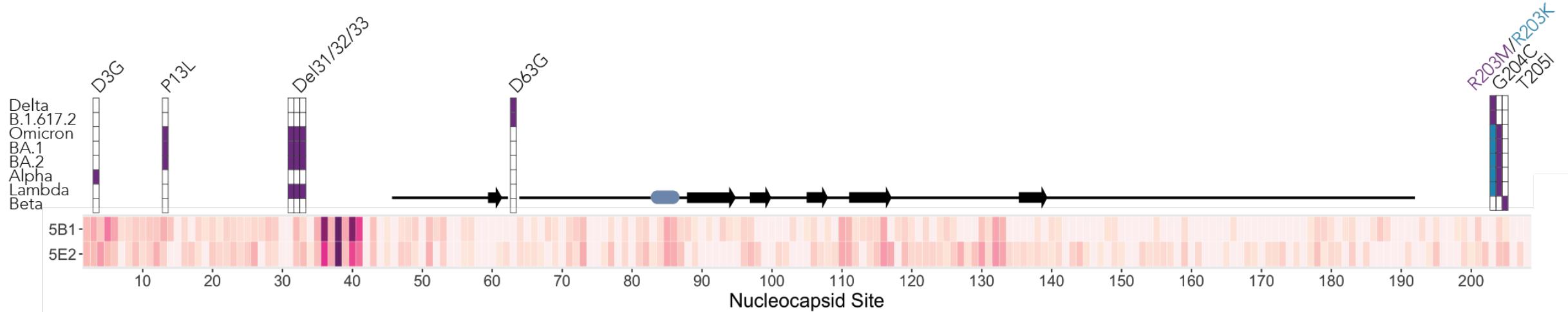
5E2



### Sequence logo



# Epitopes vs variants of concern



Results provided as part of epitope mapping efforts:

1. Slides
2. Rosalind test definition file (.csv)
3. Data files (.csv):
  1. Individual escape scores: >3 moderate; >5 high escape
  2. Total escape scores