

AbLang Module ($S \times D$)

(160 x 1) (160 x 1)
L: DIQMTQ... + H: EVQLVE...

AbLang
Model
(Heavy
or Light
Chain)

backprop

Sequence
Embedding



Sequence Embedding ($W \times 768$)



dense layer

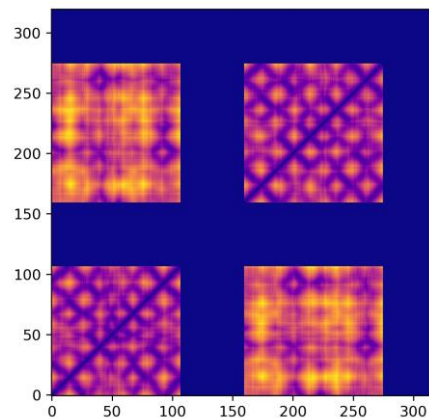
Ensemble Fusion Module ($C \times L \times W \times H$)

Residue Centroid (roid) Distance Maps

Fv Ensemble

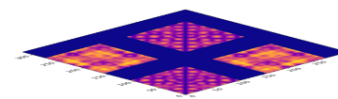
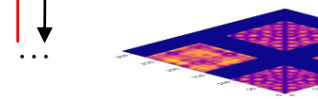
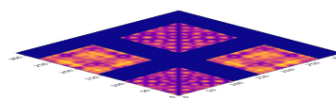
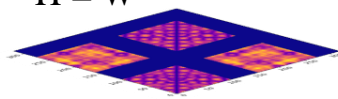
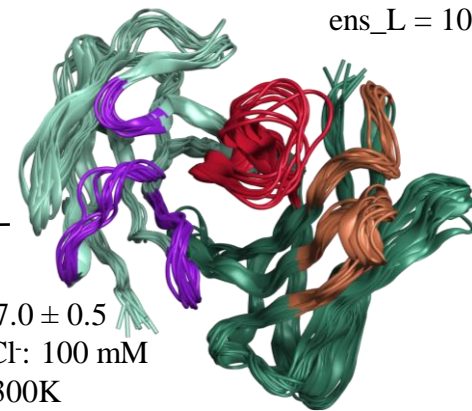
Key:
 S = Padded sequence length
 D = Language model embedding dimension

 C = atomset (residue centroid)
 L = Ensemble length
 W = distance map size
(320 Fv, 128 CDRs, 64 CDR3s)
 $H = W$



pH: 7.0 ± 0.5
Na⁺Cl: 100 mM
 $T = 300K$

ens_L = 10



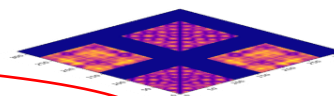
Encoder



Feature Vectors

Transformer Fusion Module

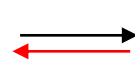
Decoder



backprop



Ensemble Fusion Embedding ($W \times 768$)



mAb property prediction