

**Anti-CD117 AMG 191 (Humanized SR1):
Conditioning**

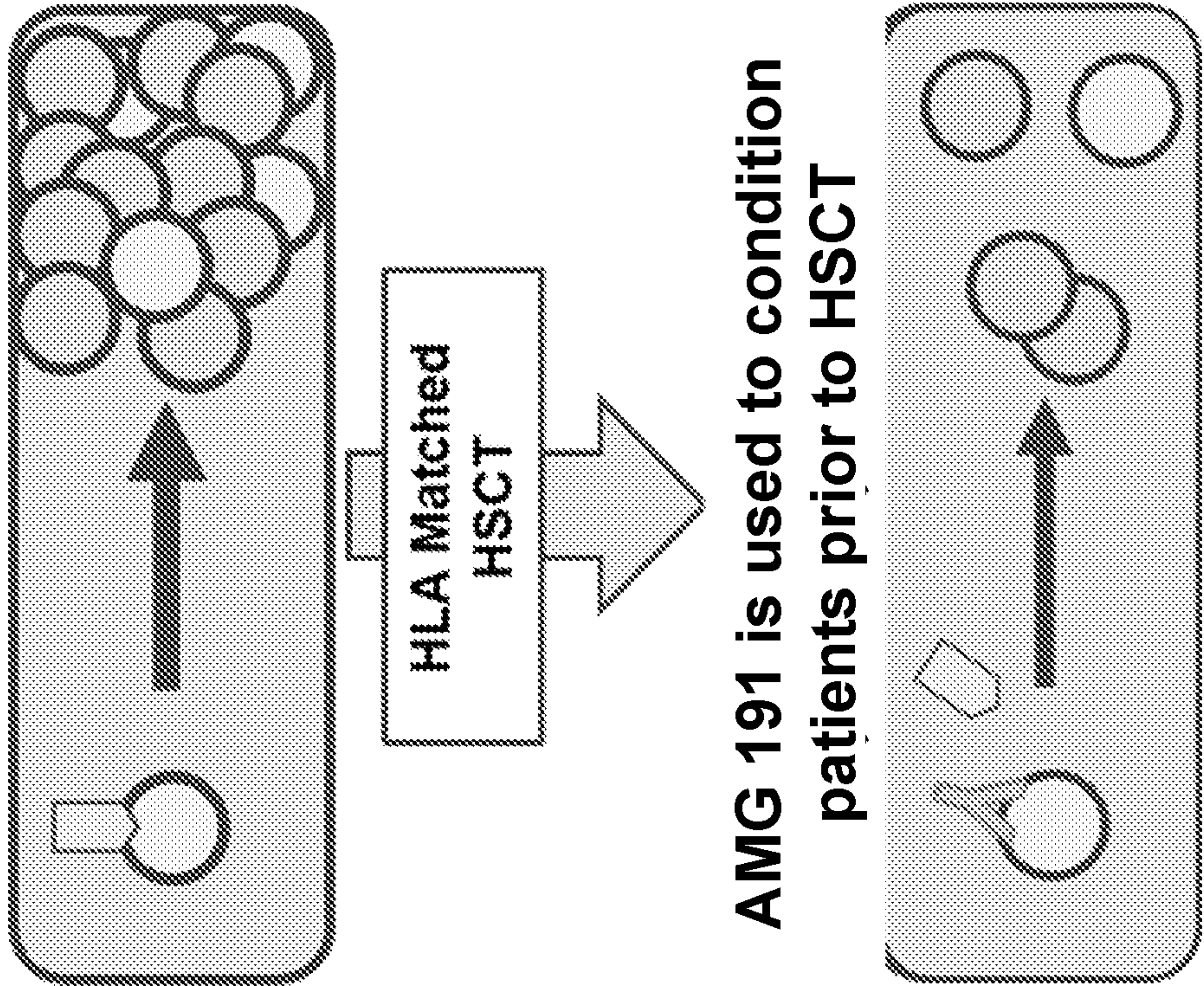
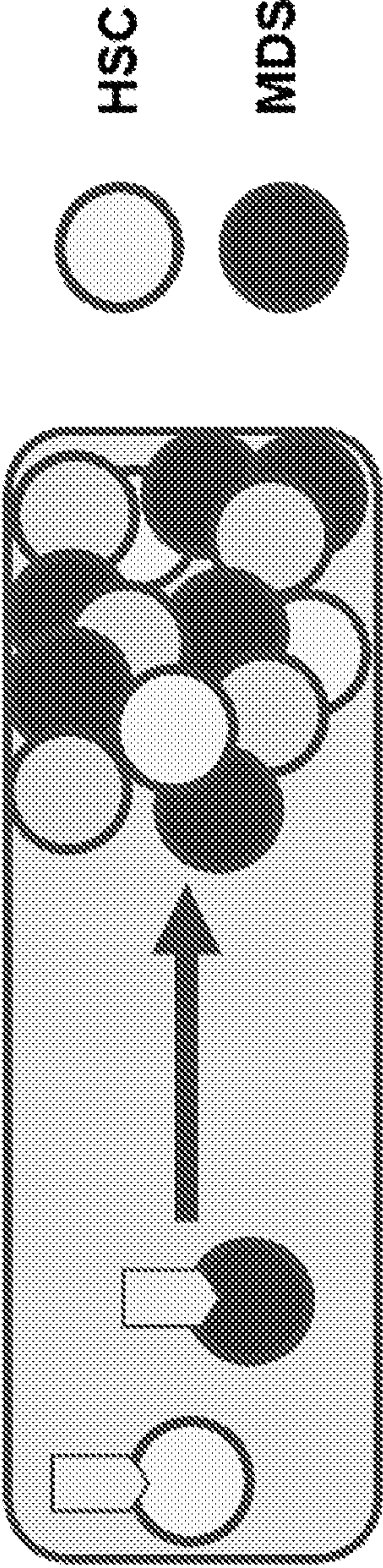


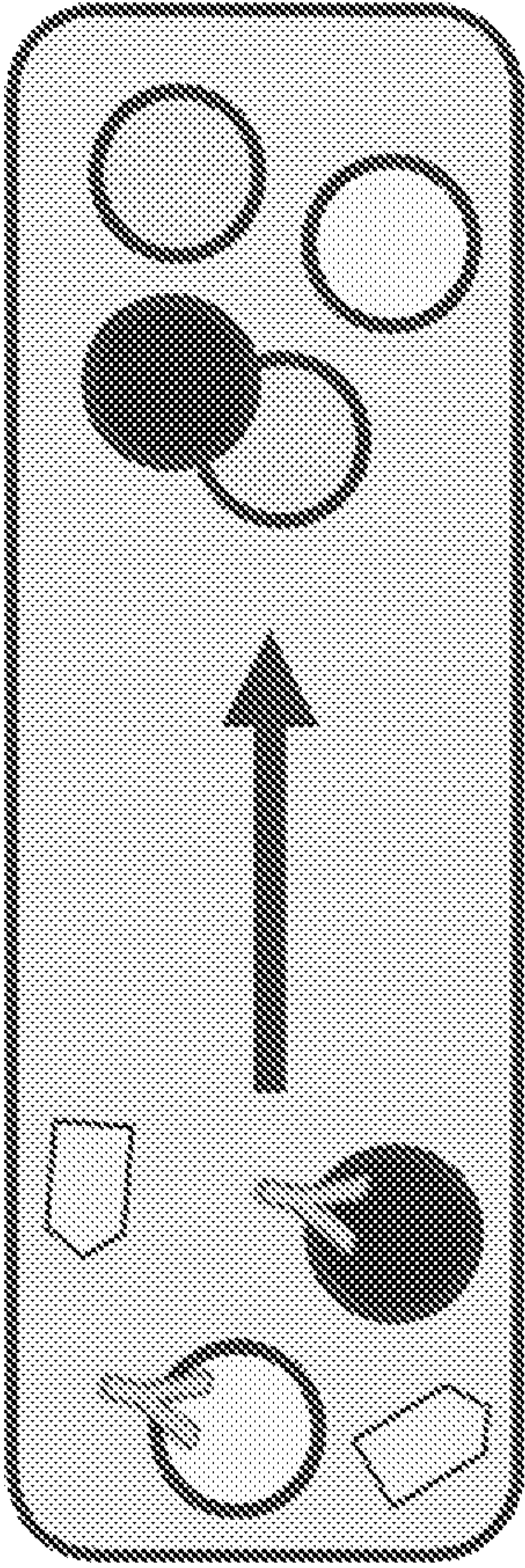
FIG. 1

Anti-CD117 SR1 (AMG 191) Depletes Human HSPCs and MDS cells In vivo

SCF drives MDS survival and HSC self-renewal and differentiation into progenitor cells



CD117 Antibody blocks SCF binding to CD117, depleting HSCs and MDS cells



- Efficient depletion requires administering SR1 on days 1, 3, 5, and 7
- Repeated dosing puts donor cells at risk of being depleted

FIG. 2

Non-Toxic Conditioning to Enable HSCT with Autologous Gene Edited Cells for Patients with Hematologic Diseases

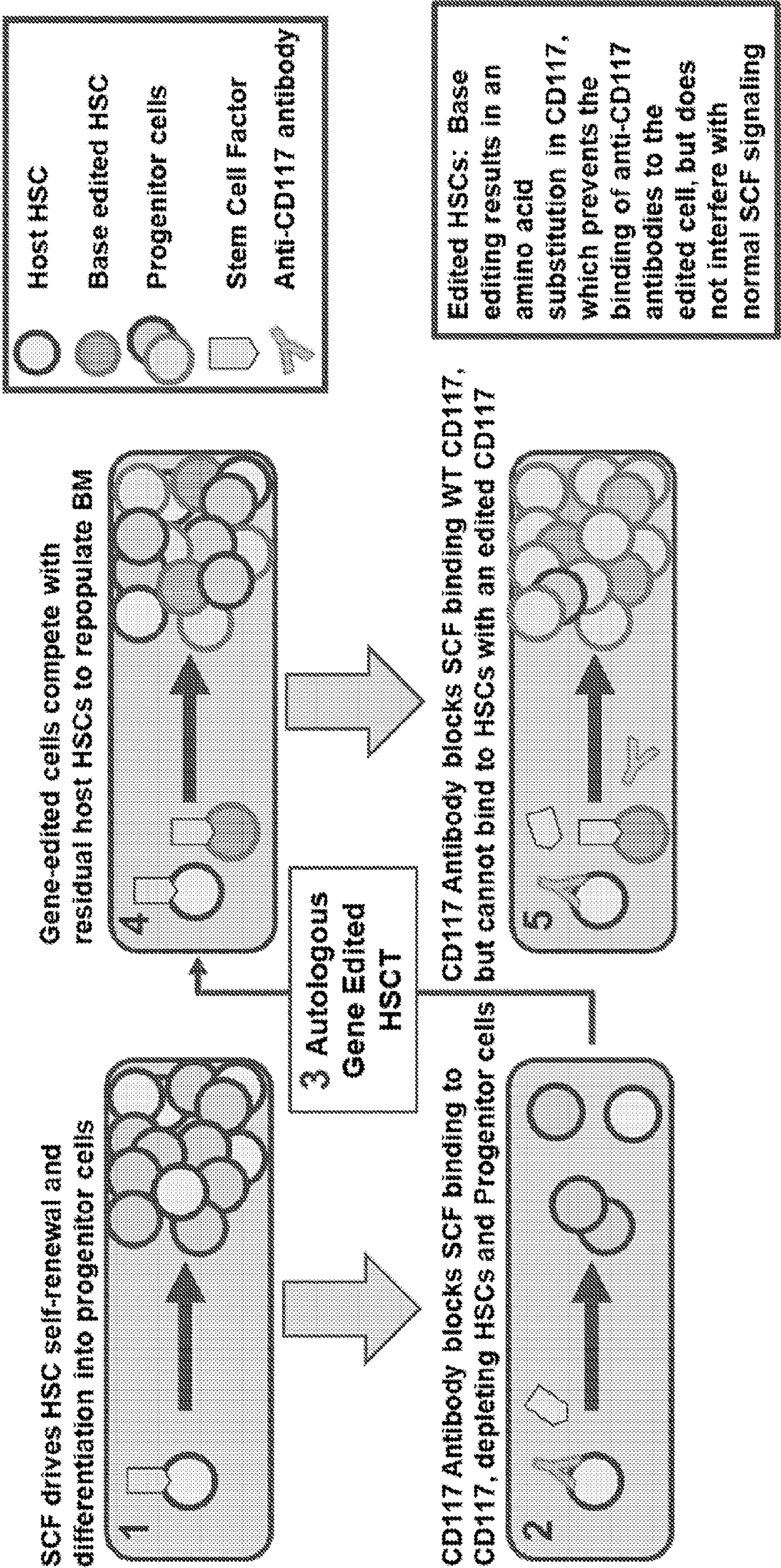


FIG. 3

Antibody Based Conditioning Utilizing
CD117 Edited HSCs – SCF binding

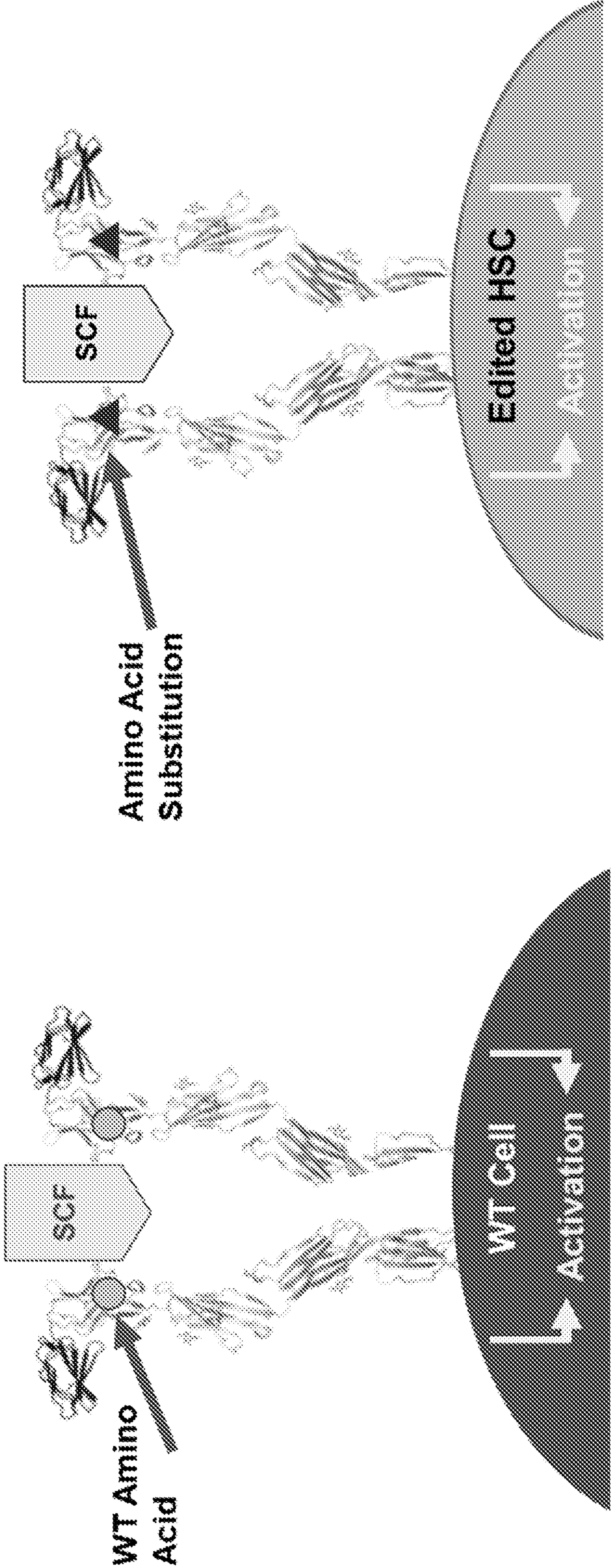


FIG. 4

Antibody Based Conditioning Utilizing
CD117 Edited HSCs – anti-CD117 binding

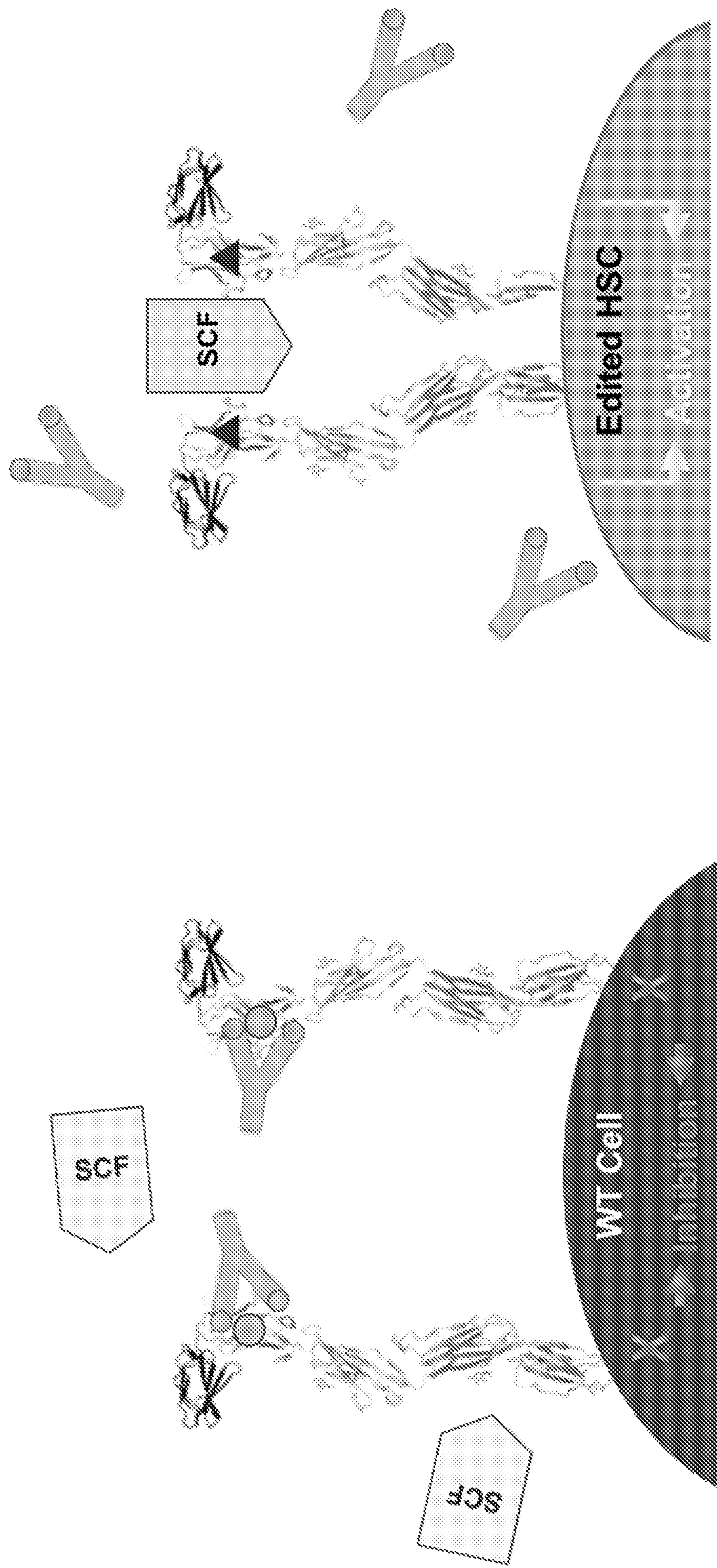


FIG. 5

Makassar-WT guide

PCR_BTx176																							
S506-2_not_treated																							
T	0.01%	0%	99.99%	99.99%	0.01%	99.98%	0.01%	0.05%	99.91%	0.01%	0%	0%	0%	0%	99.99%	0.15%	2.15%	0.01%	0%	99.96%	0.02%	0.01%	
G	0.01%	0%	0%	0%	0%	0%	0%	0%	0.01%	0%	99.98%	99.99%	0.02%	99.97%	0%	0%	0.02%	99.88%	0.31%	0%	99.97%	0%	
C	0%	100%	0%	0.01%	99.99%	0.01%	99.99%	99.94%	0.01%	99.98%	0%	0.01%	0%	0%	0%	99.85%	0%	0%	0%	0.04%	0%	99.99%	
A	99.98%	0%	0%	0%	0%	0.01%	0.01%	0.01%	0.08%	0.01%	99.98%	0.01%	0.01%	99.98%	0.03%	0%	97.83%	0.11%	99.68%	0%	0.01%	0%	
#	33952	34007	33953	34026	33964	33994	34040	34017	33999	33971	34035	34004	34040	33966	34031	34072	33995	17646	33963	33947	34004	34020	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Position along target site (bp)																							

HPFH guide

PCR_BTx271																							
S488-1_TFX33_S8																							
T	0.01%	99.98%	99.99%	0%	0.02%	0.21%	0.33%	0.03%	0%	99.96%	0%	0.01%	0.03%	0.01%		99.99%	99.97%	0%	0%	0.02%	0%		
G	0%	0%	0%	99.95%	85.64%	0.14%	0.13%	42.15%	4.99%	0.02%	6.33%		99.97%	0%	0%		99.99%	0%	0.02%	0%	0.02%		
C	99.98%	0.01%	0.01%	0%	0.02%	99.49%	99.31%	0.13%	0%	0.01%	0%		99.96%	99.97%		0.01%	0.02%	0%		99.93%	0%		
A	0.01%	0.01%	0%	0.01%	14.31%	0.16%	0.22%	57.68%	94.98%	0.01%	93.65%		0.01%	0.01%	0.01%	0%	0.01%	0.01%	99.97%	0.01%	99.98%		
#	29195	29174	29143	29091	28972	29101	29134	29098	29175	29195	29186	29169	29165	29204	29204	29713	29150	29089	29185	29219	29224		

FIG. 6

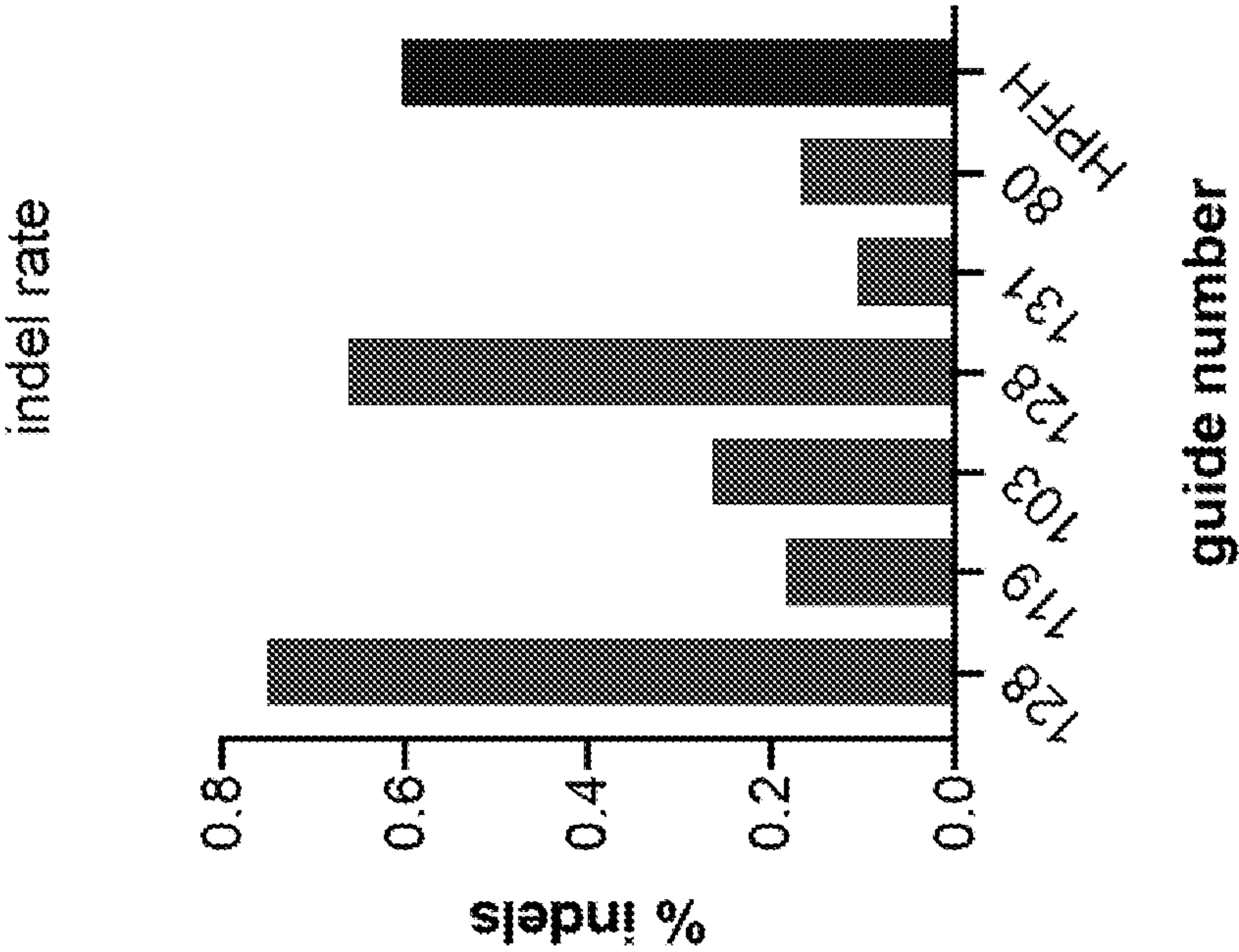


FIG. 7B

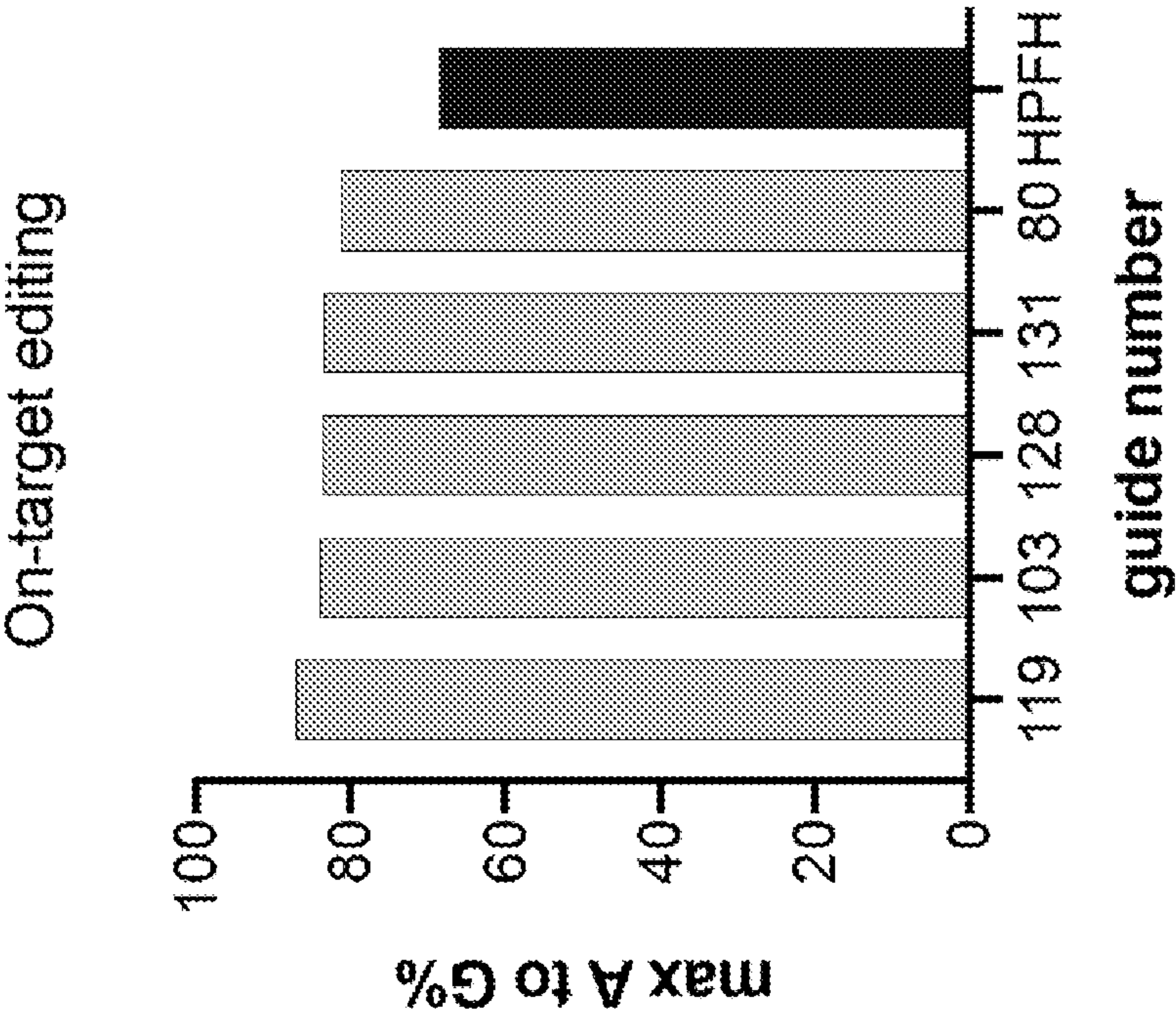


FIG. 7A

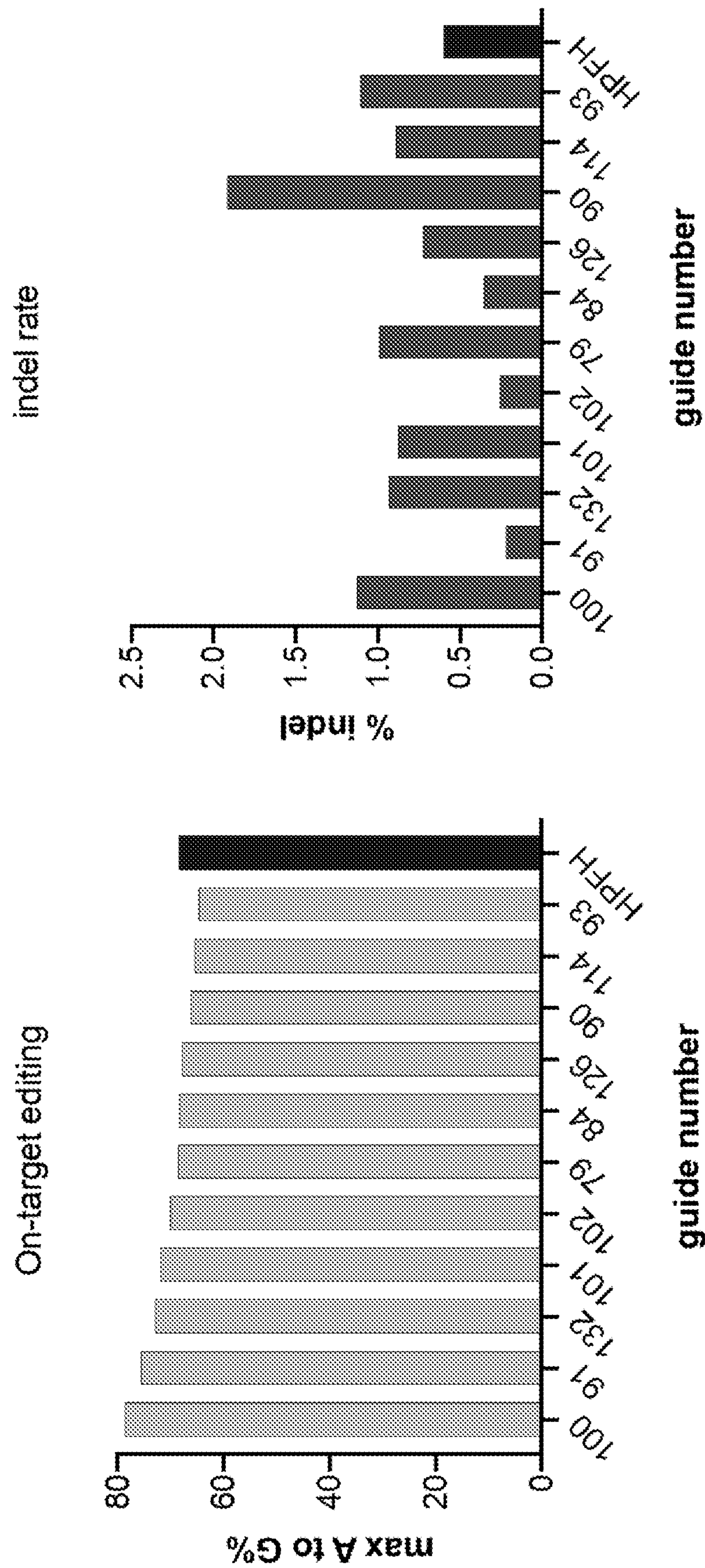


FIG. 8A

FIG. 8B

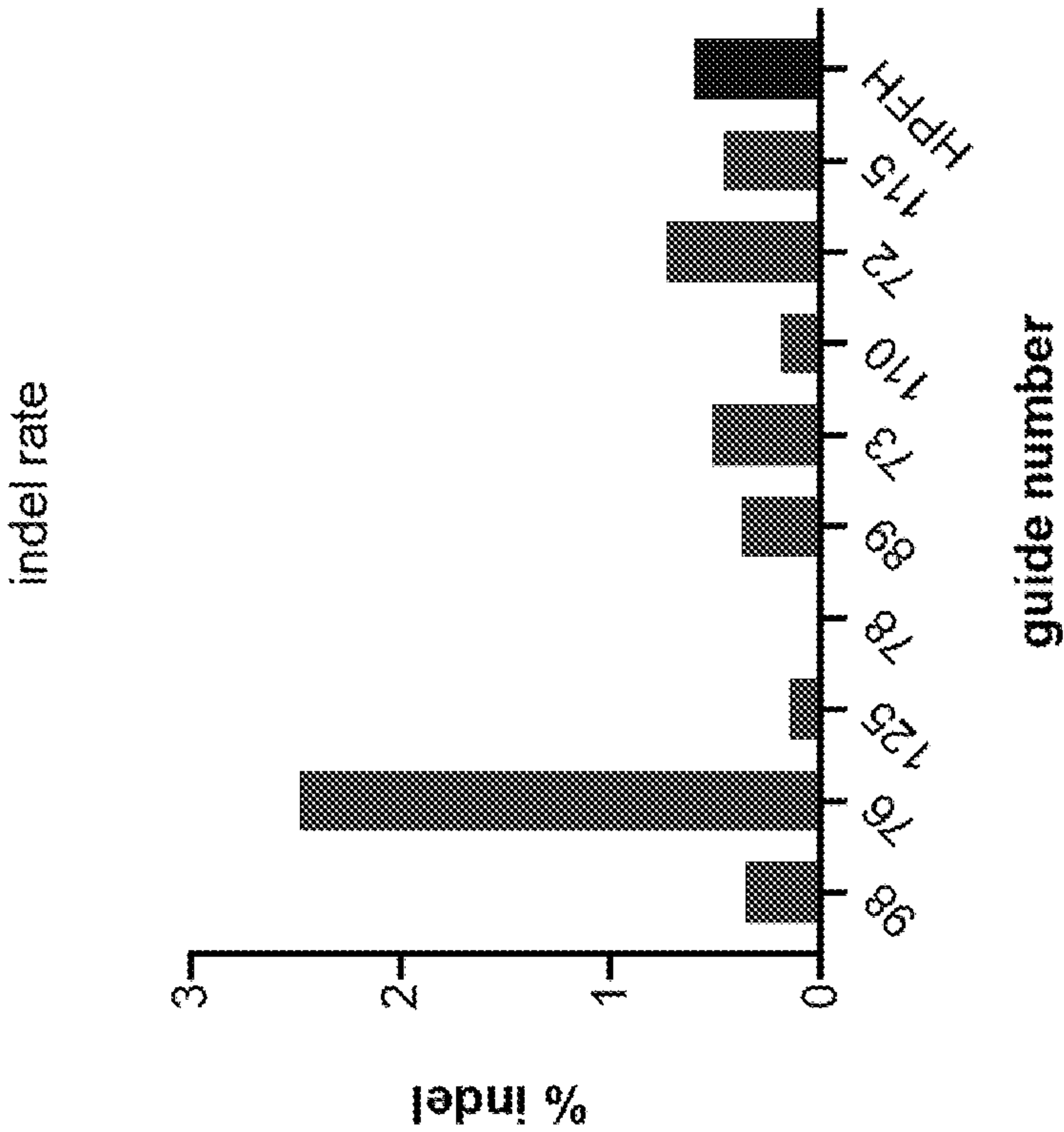


FIG. 9B

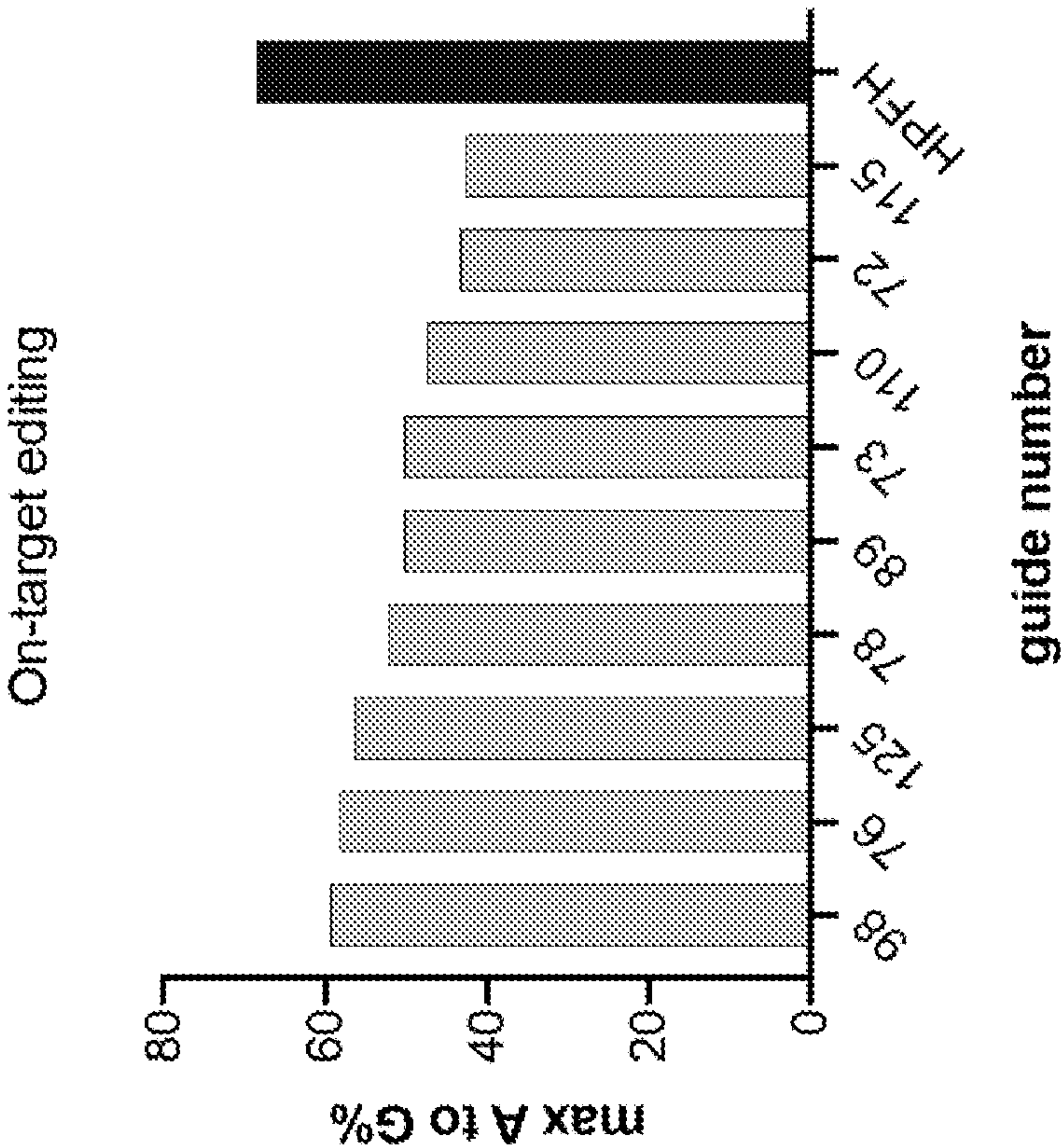


FIG. 9A

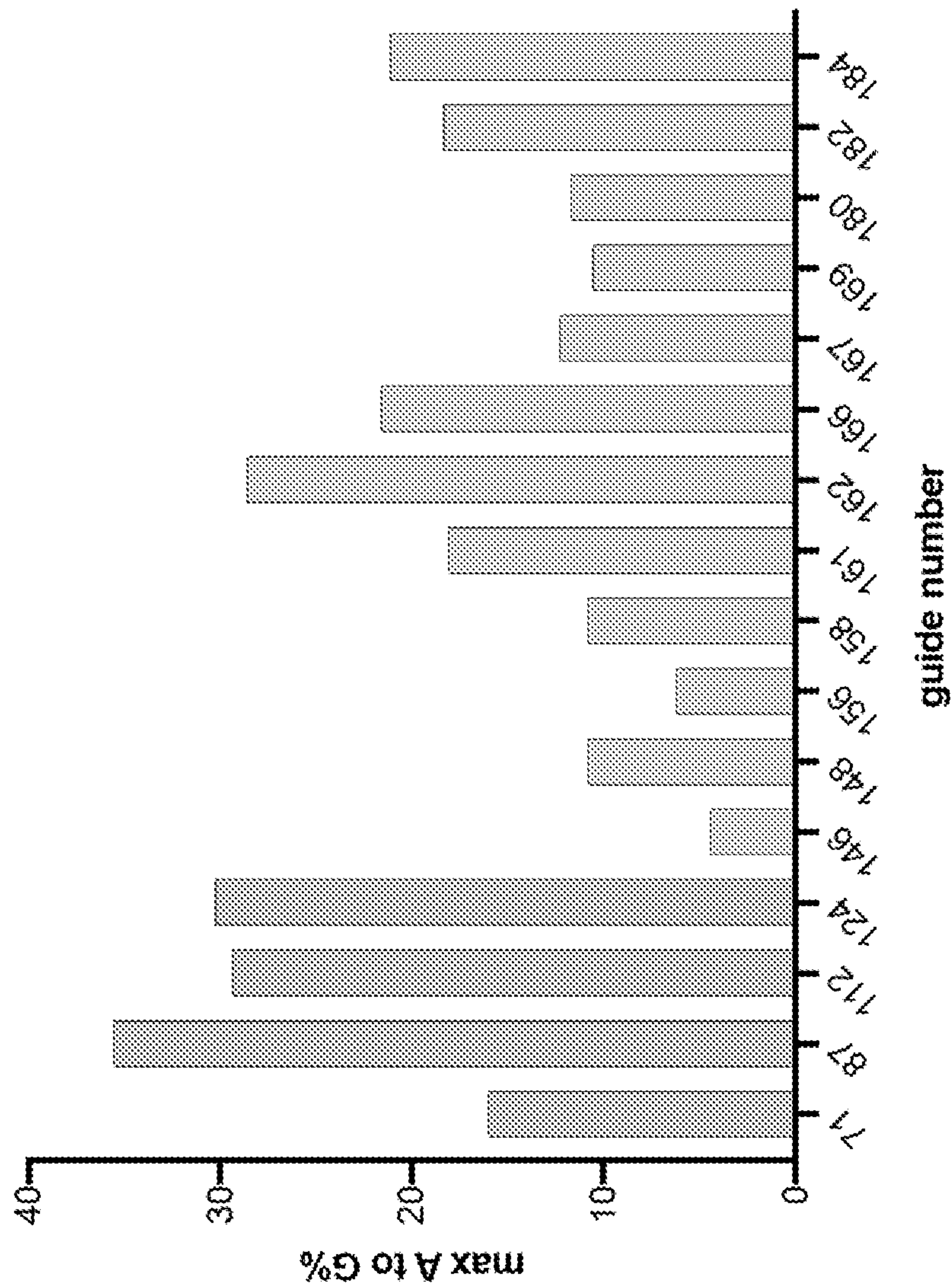


FIG. 10

Guide cc-119 (D45G)

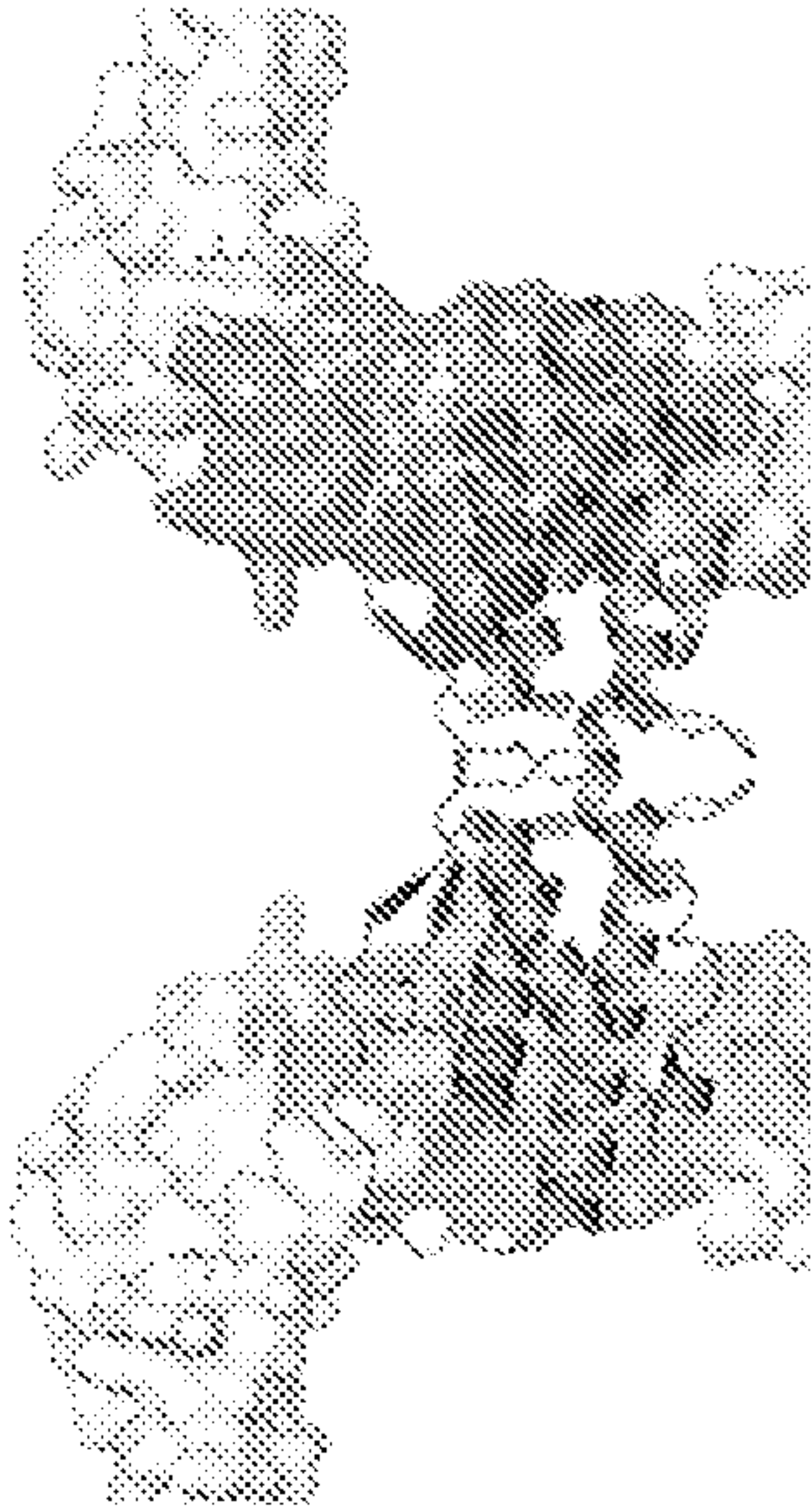
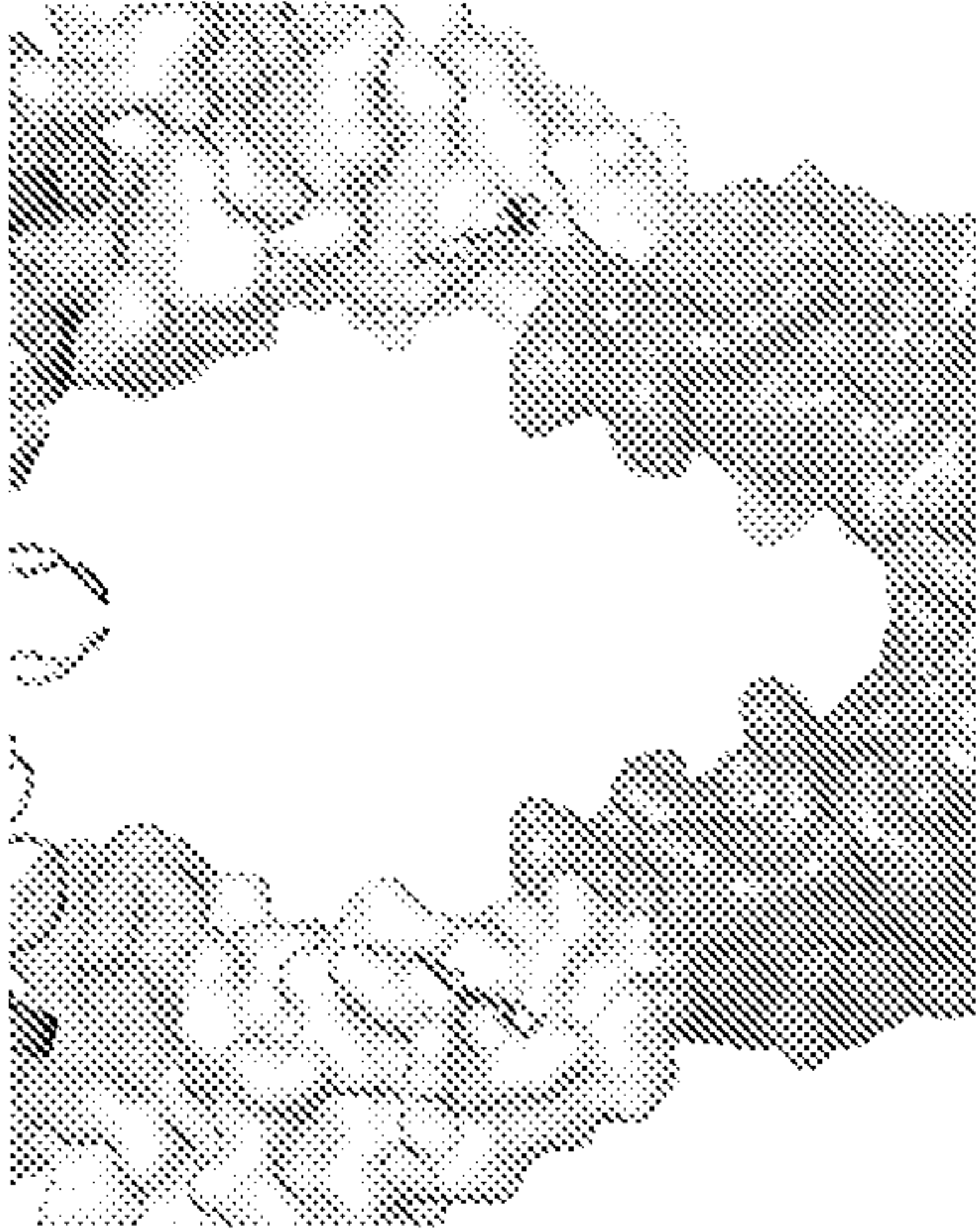


FIG. 11A

FIG. 11C

Guide cc-103 (Y221C)



Guide cc-128 (Y259C/N260V)

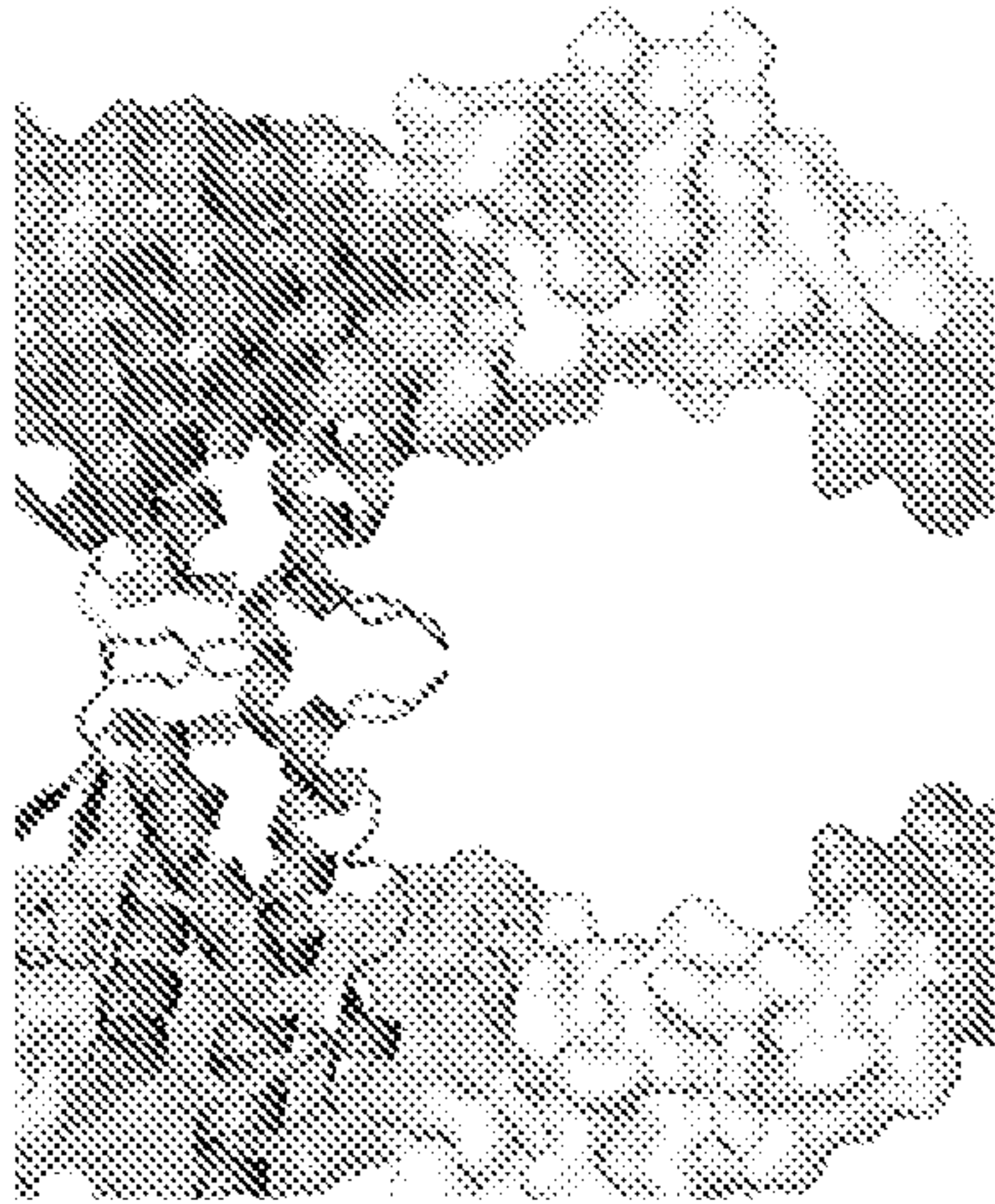
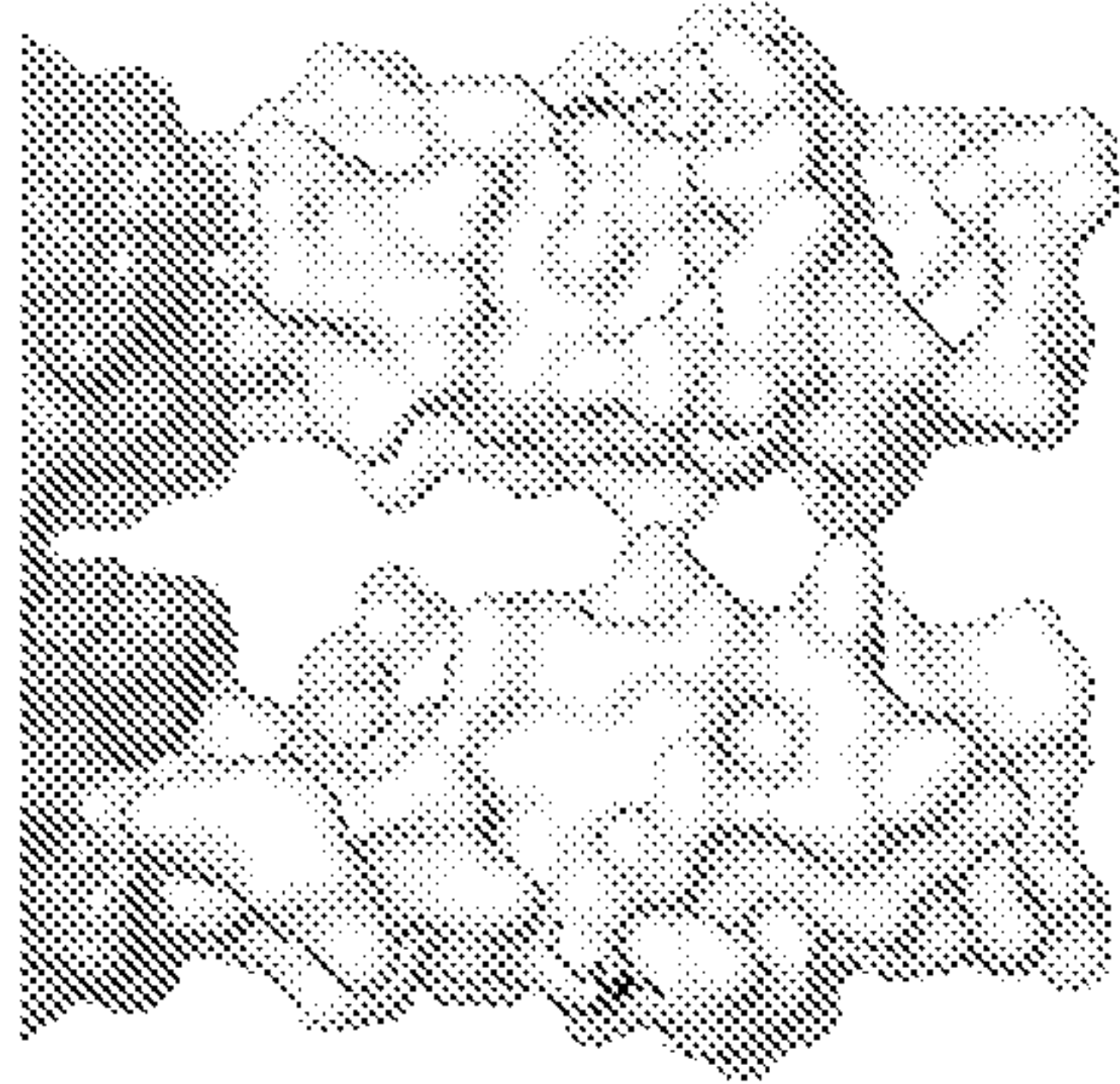


FIG. 11B

FIG. 11D

Guide cc-91 (T461A)



Guide cc-101 (L142P)

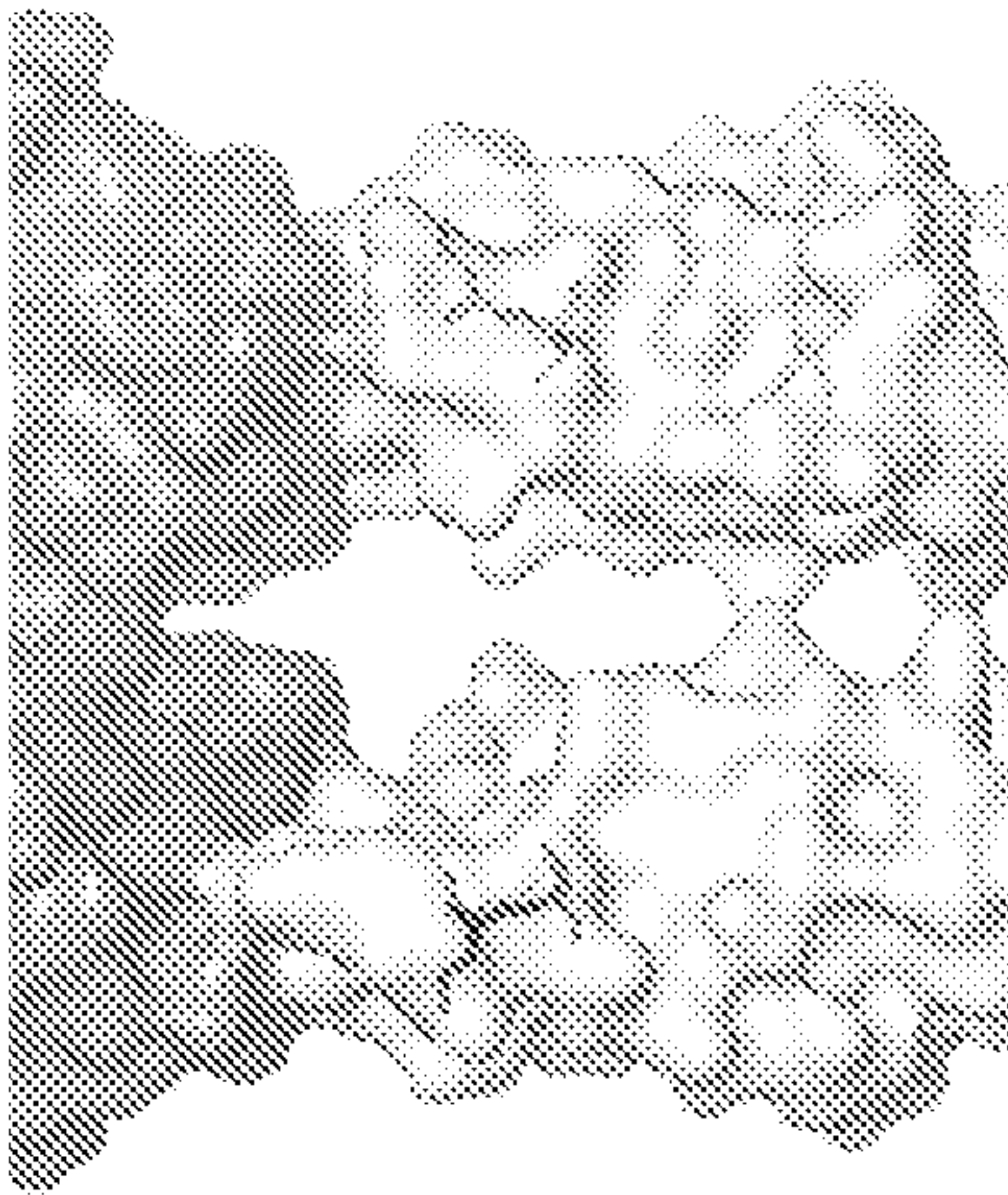


FIG. 11E

Guide cc-79 (M351T)

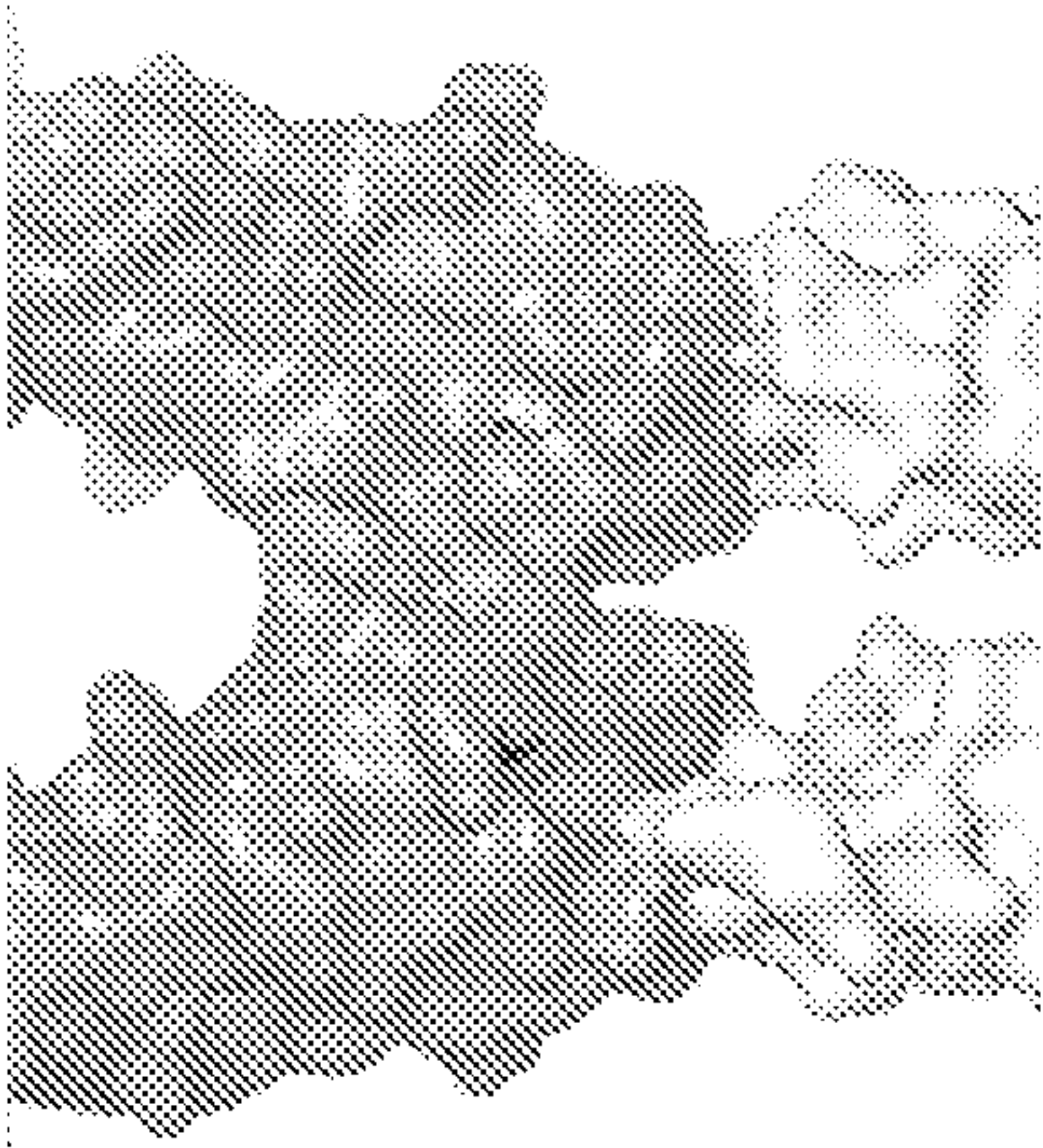


FIG. 11G

Guide cc-84(Q79R)

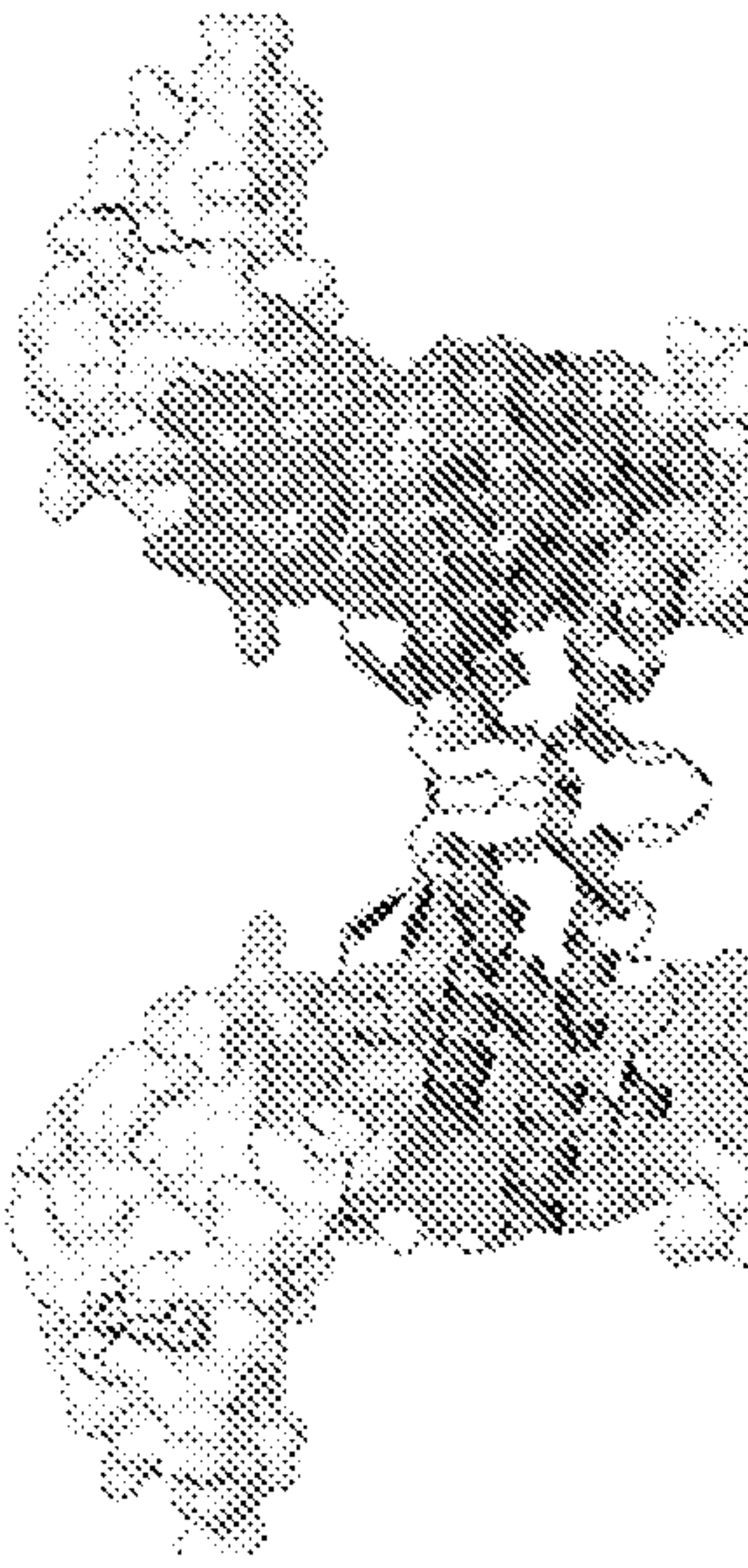


FIG. 11F

Guide cc-126 (L124P)

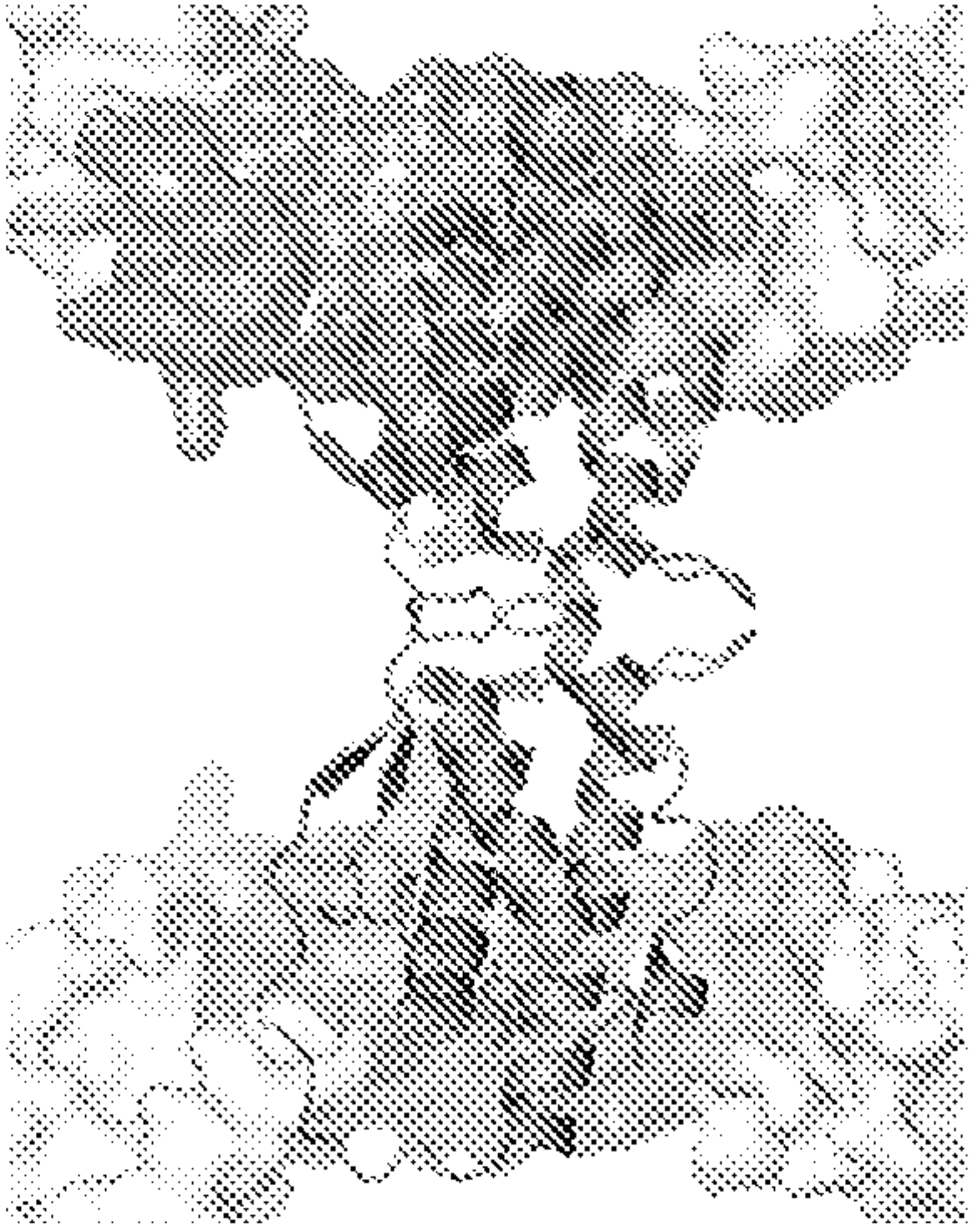


FIG. 11H

Guide cc-90 (E81G/D)

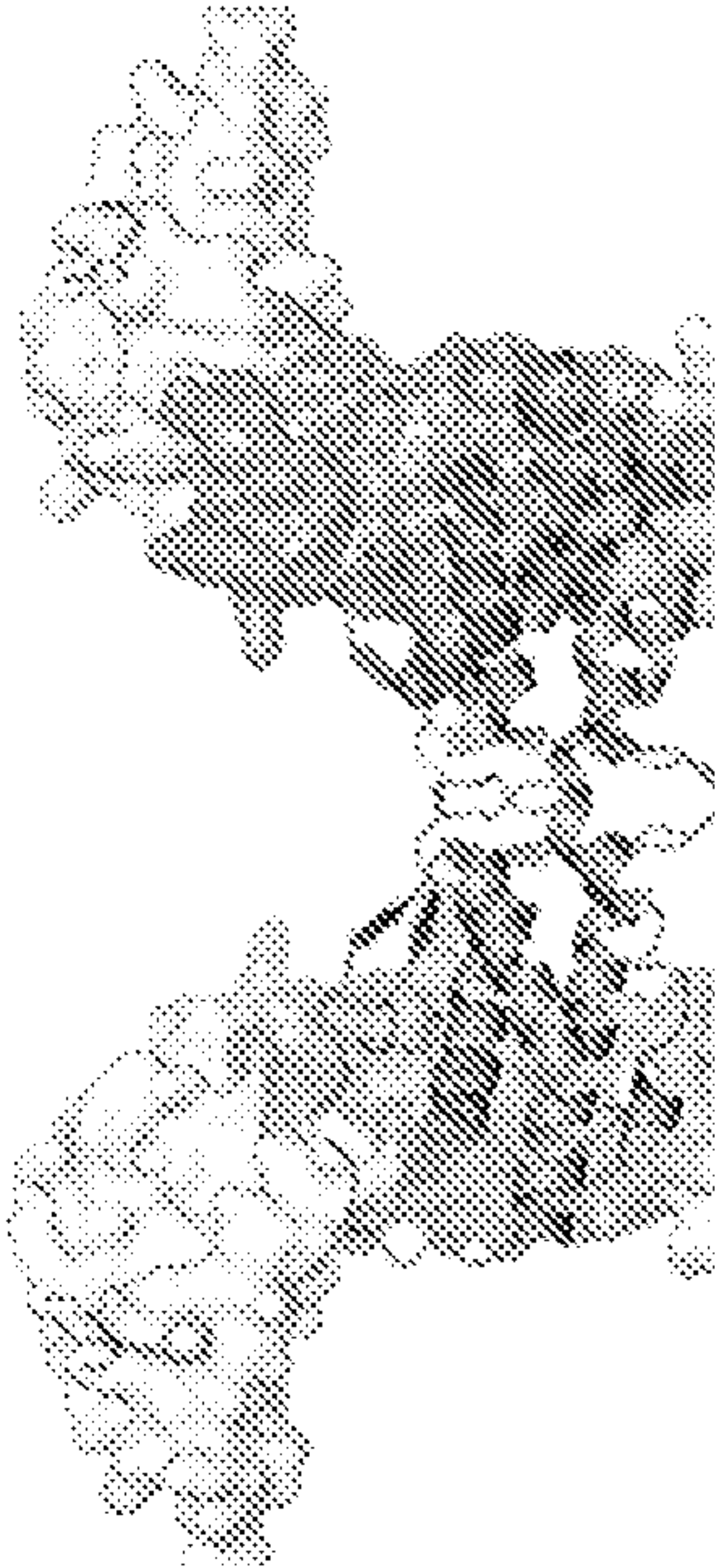
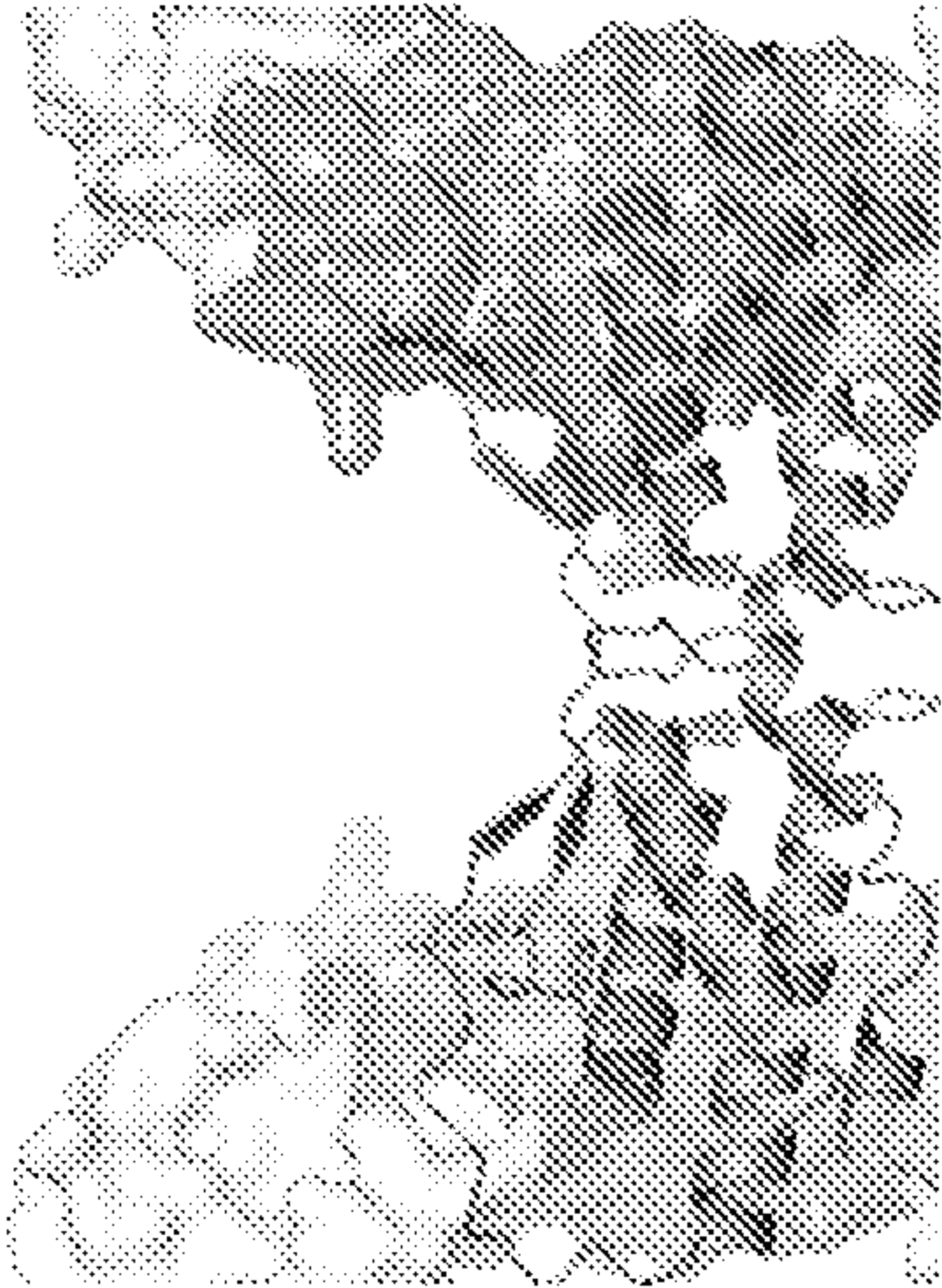


FIG. 11I

FIG. 11K

Guide cc-93 (V195A)



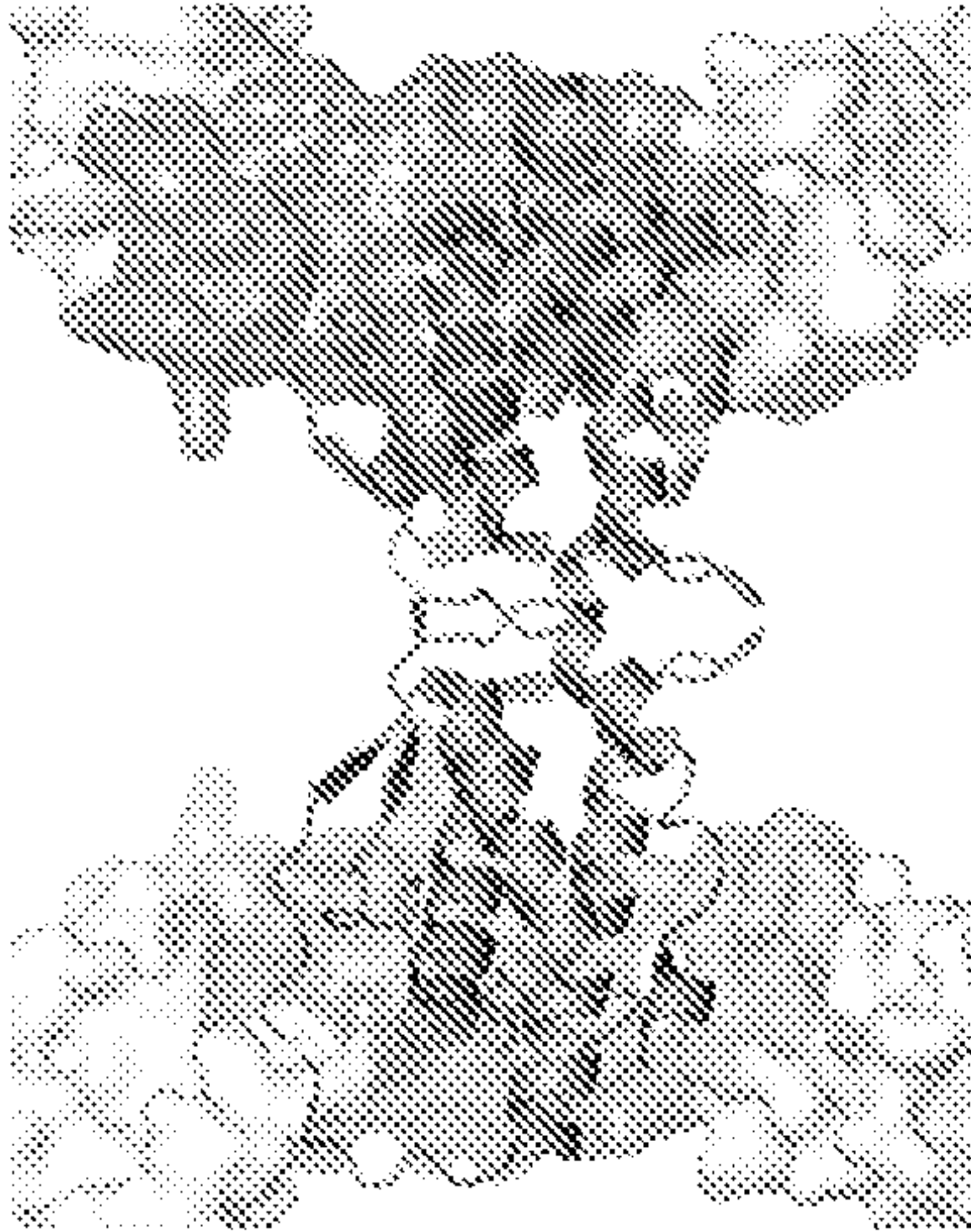
Guide cc-126 (Y125H)



FIG. 11J

FIG. 11L

Guide cc-126 (L124P)



Guide cc-98 (F324L)

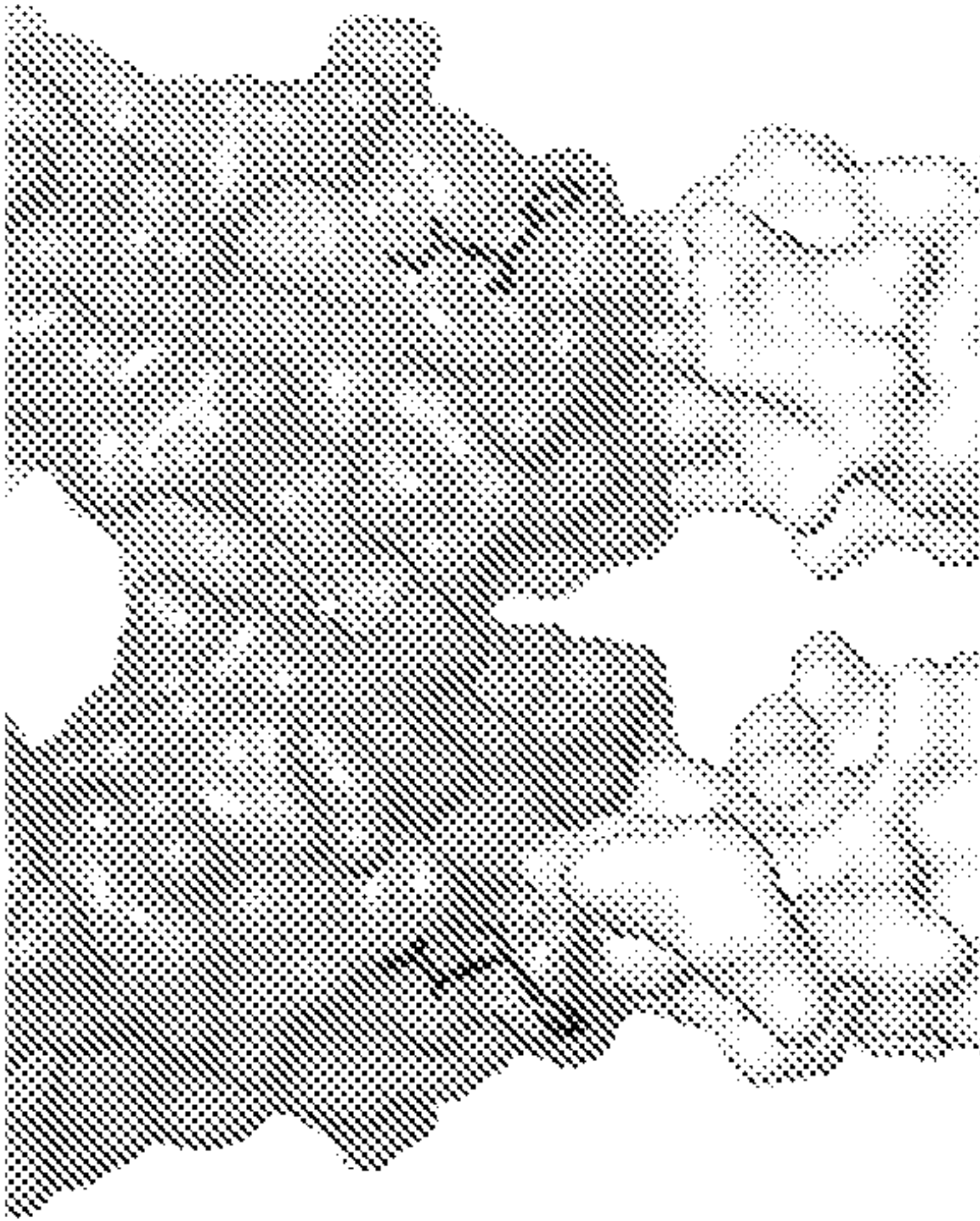


FIG. 11M

Guide cc-125 (I163V)

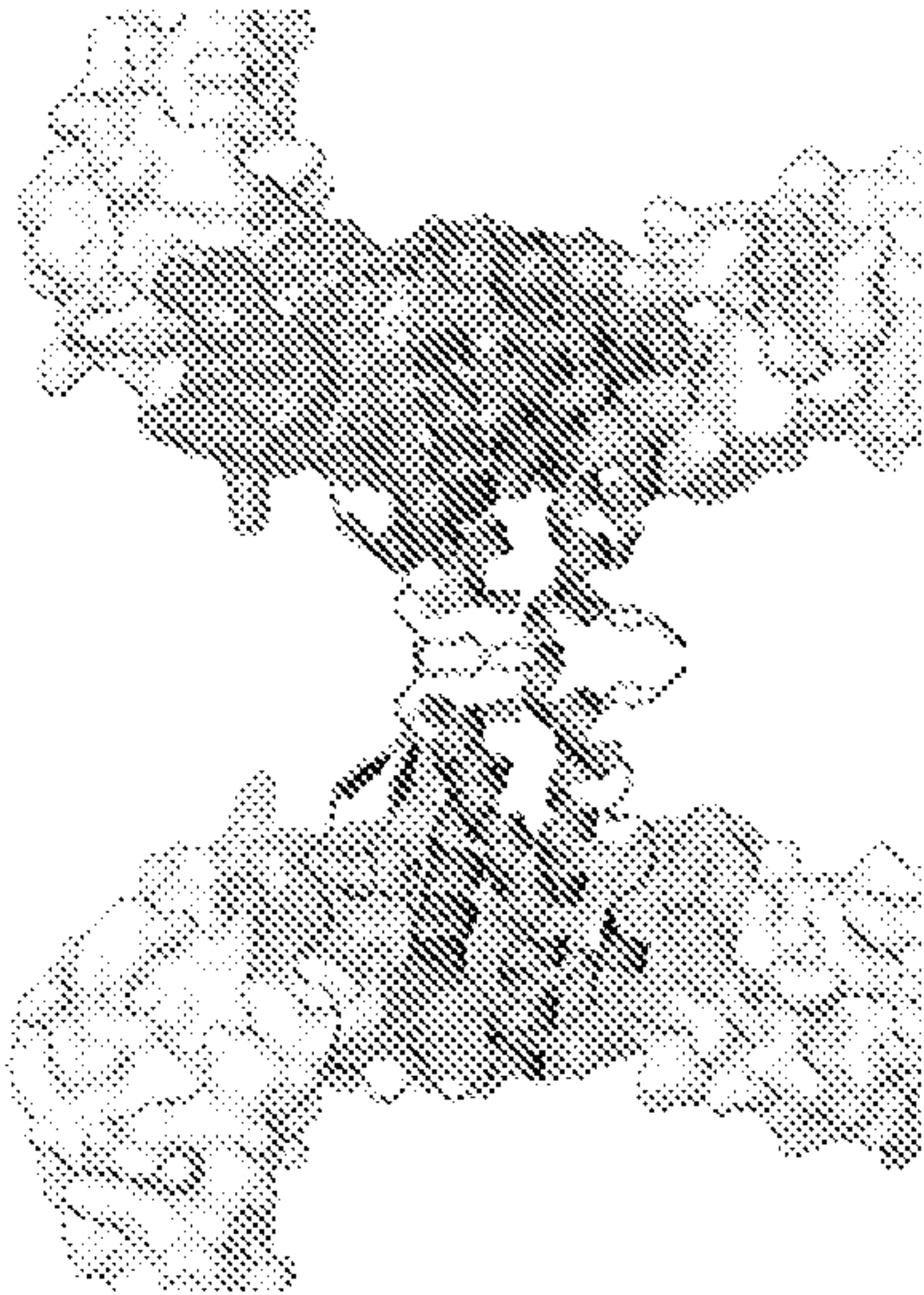


FIG. 11O

Guide cc-78 (Y418C)

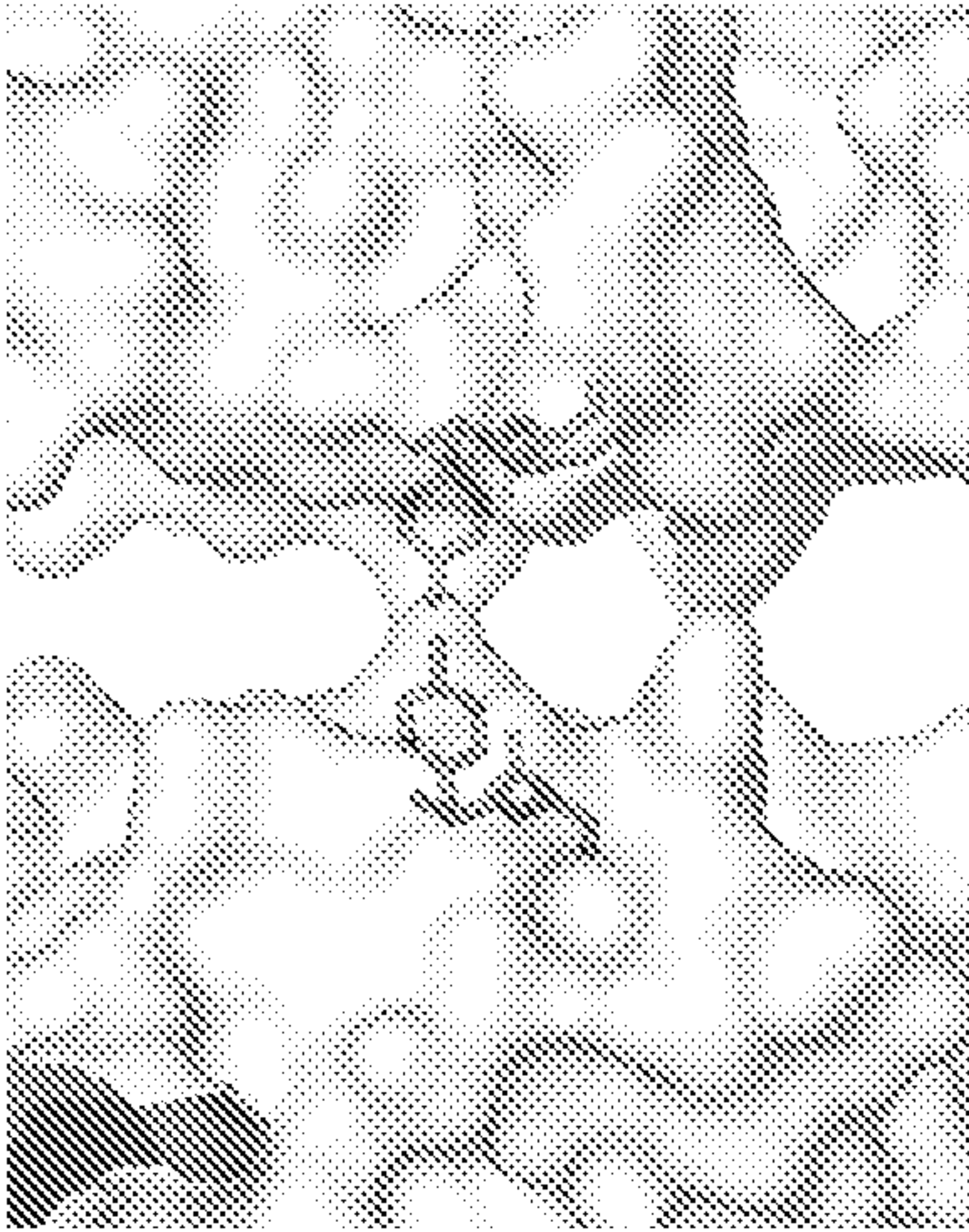


FIG. 11N

Guide cc-89 (T144A)

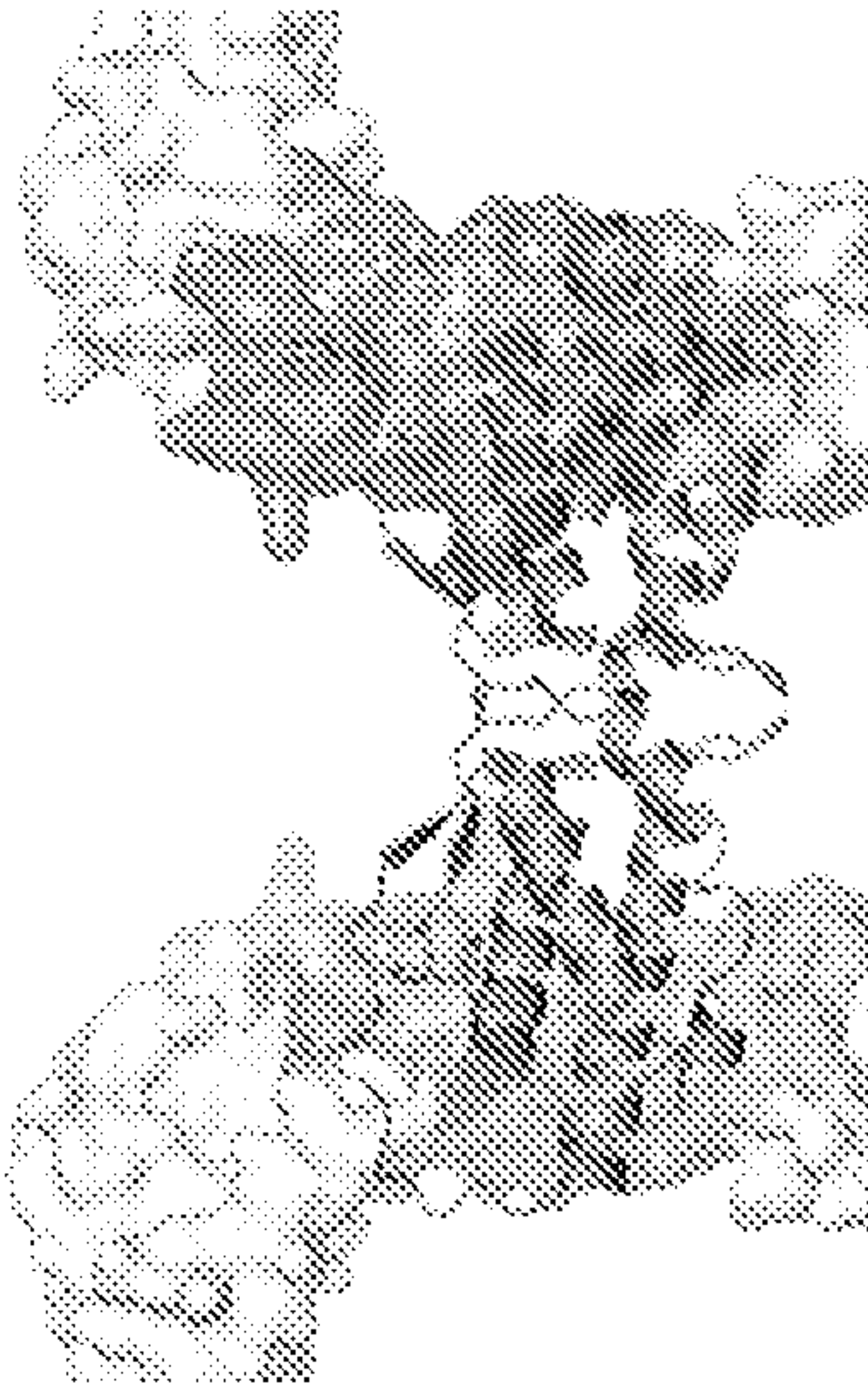


FIG. 11P

Guide cc-73 (N77G/Y)

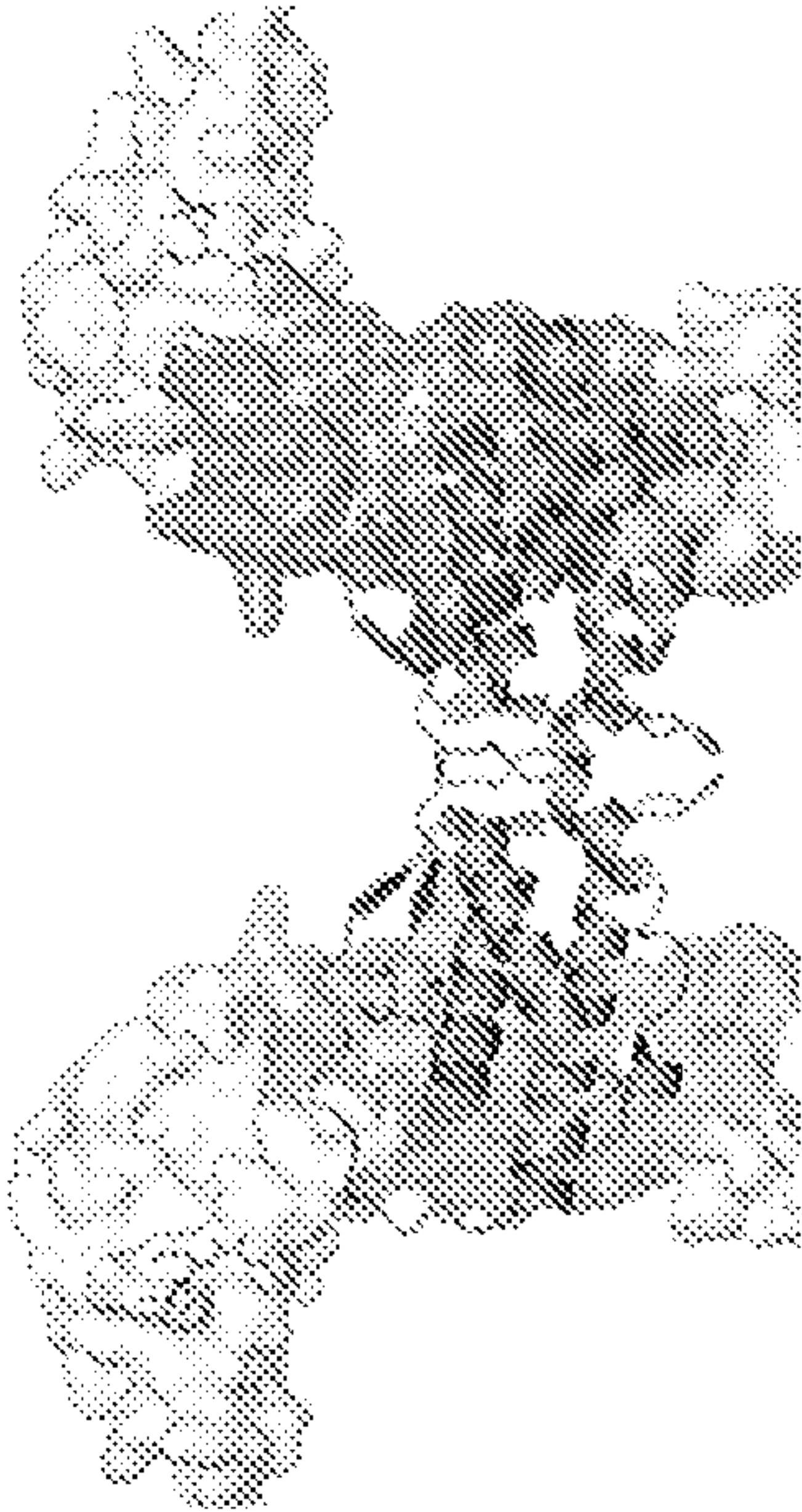


FIG. 11Q

Guide cc-110 (T322A)

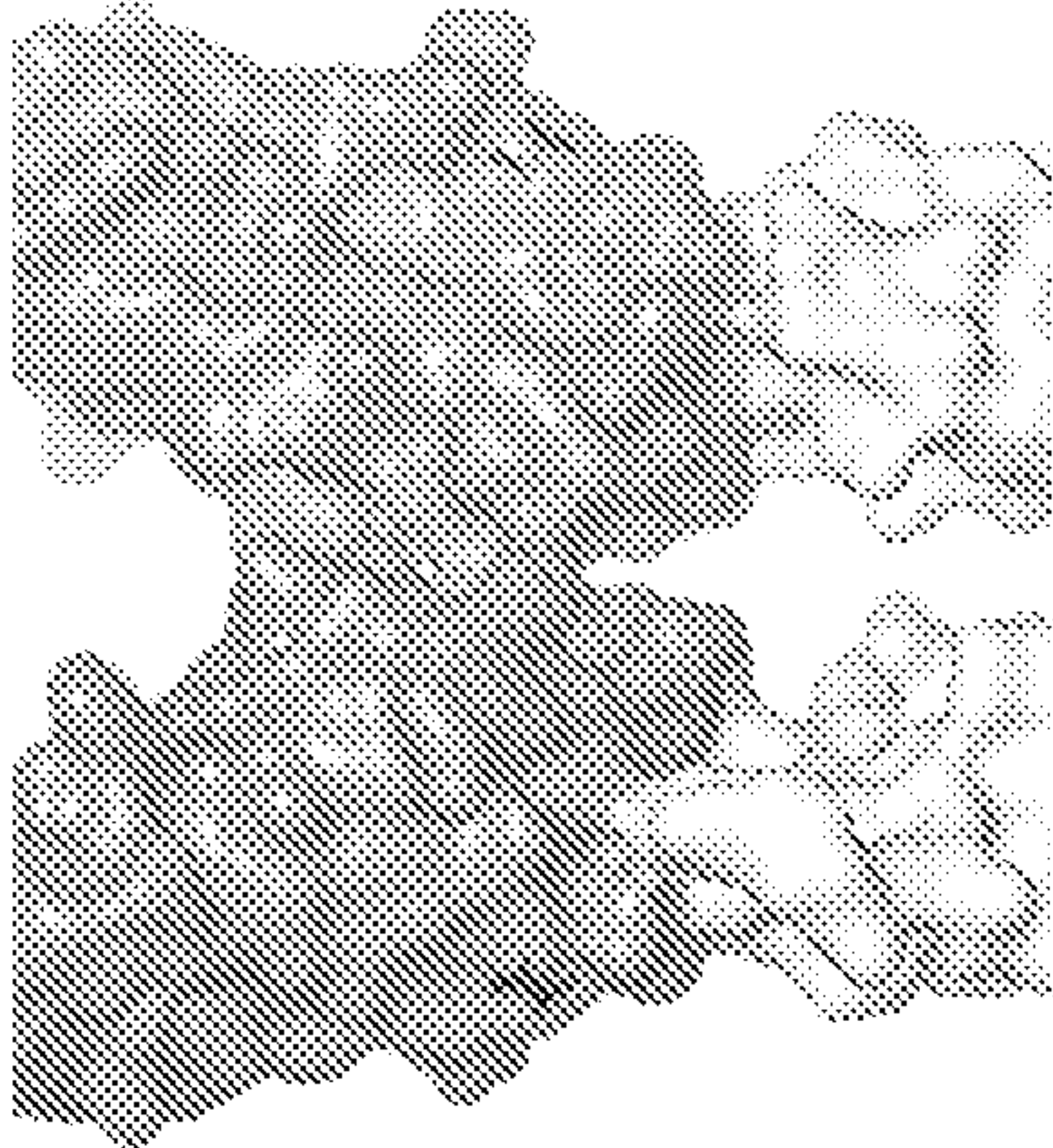


FIG. 11S

Guide cc-72 (E257G)

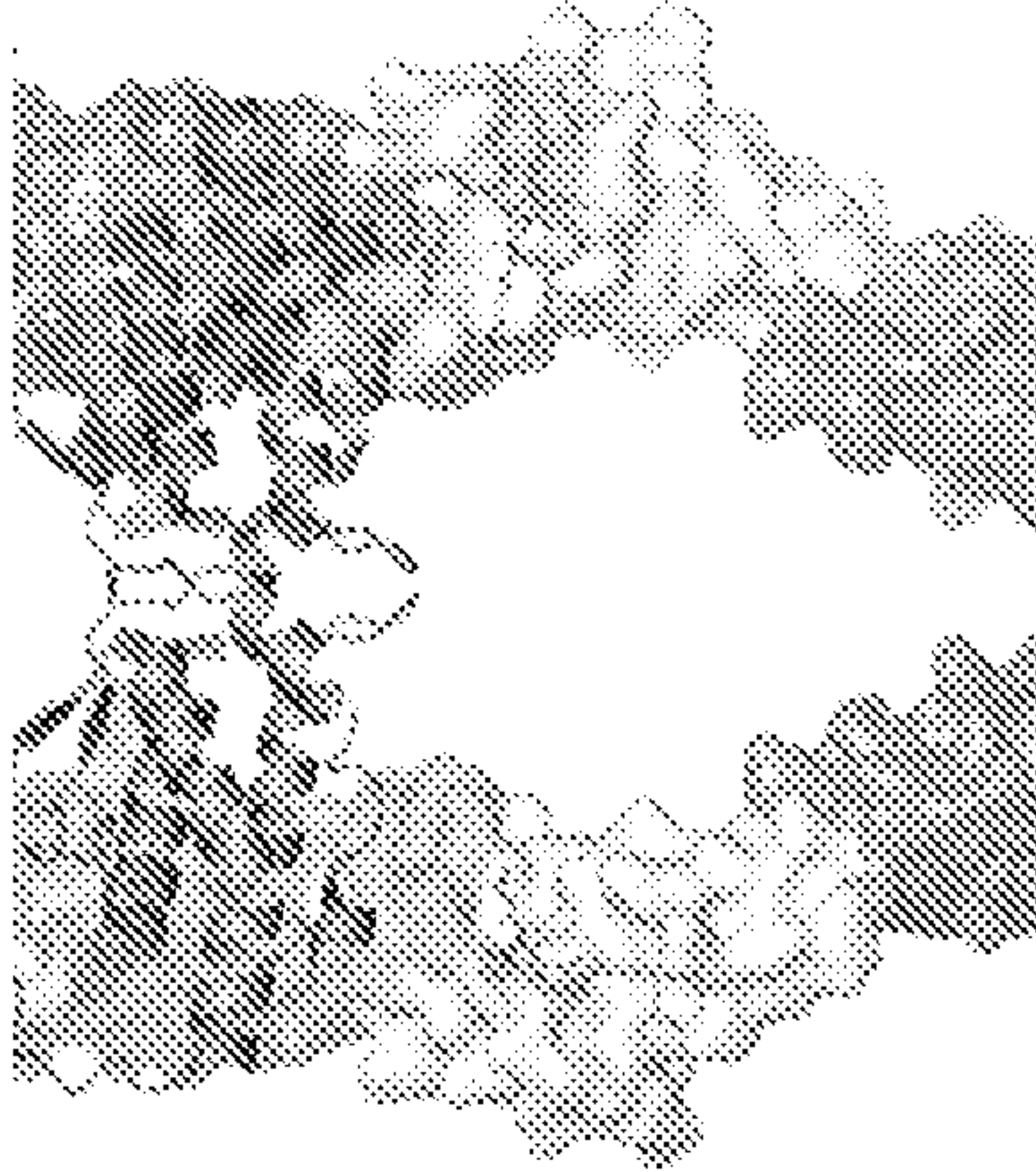


FIG. 11R

Guide cc-76 (T354A)

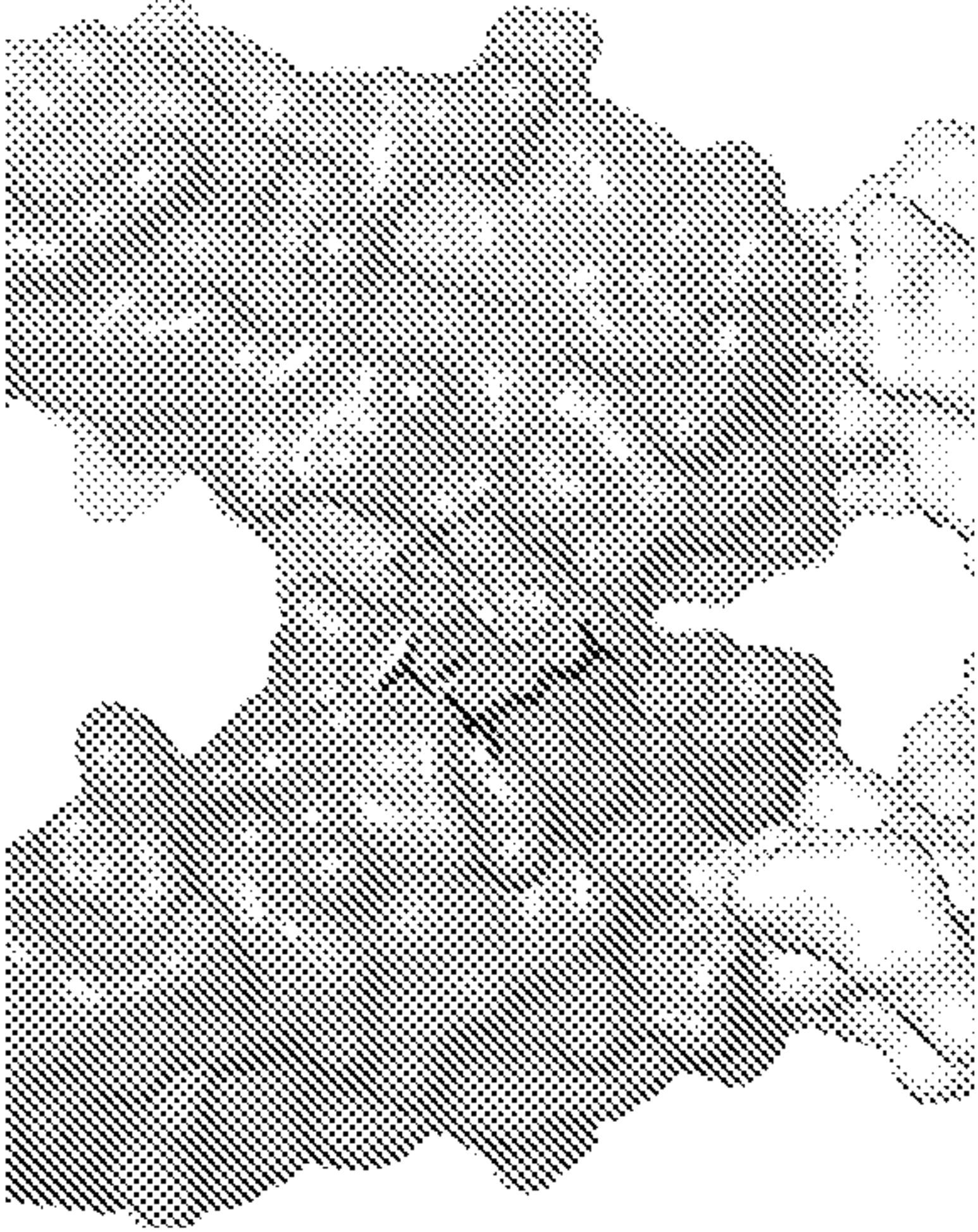


FIG. 11T

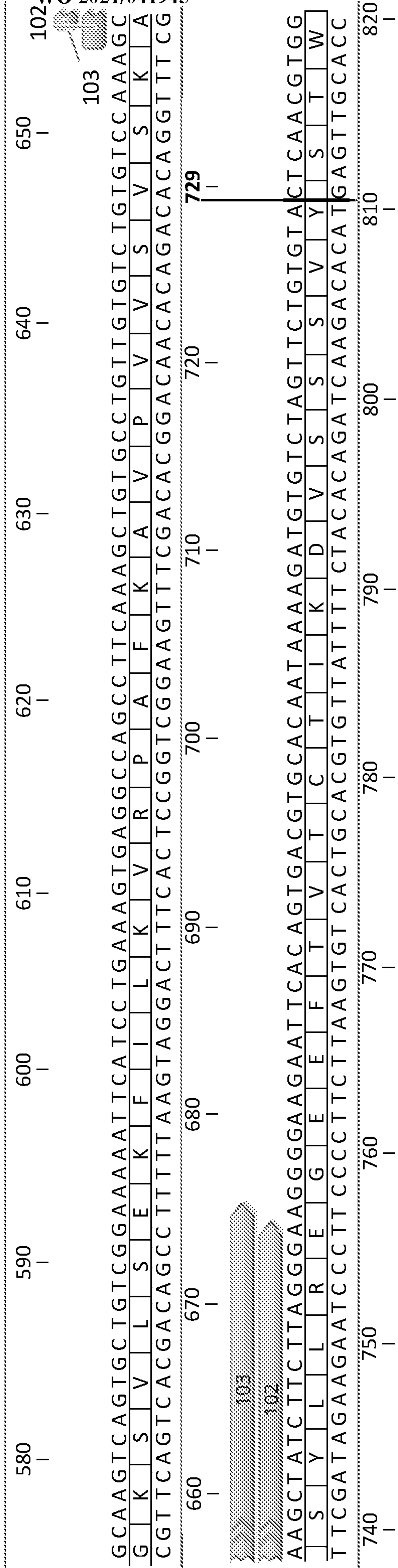


FIG. 12A

Guide cc-102

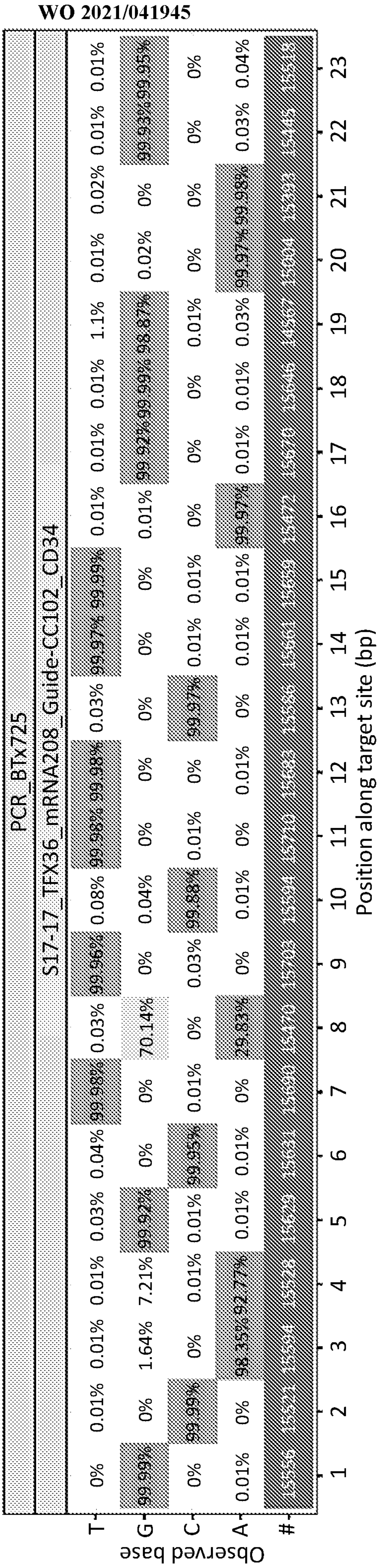


FIG. 12B

Guide cc-103

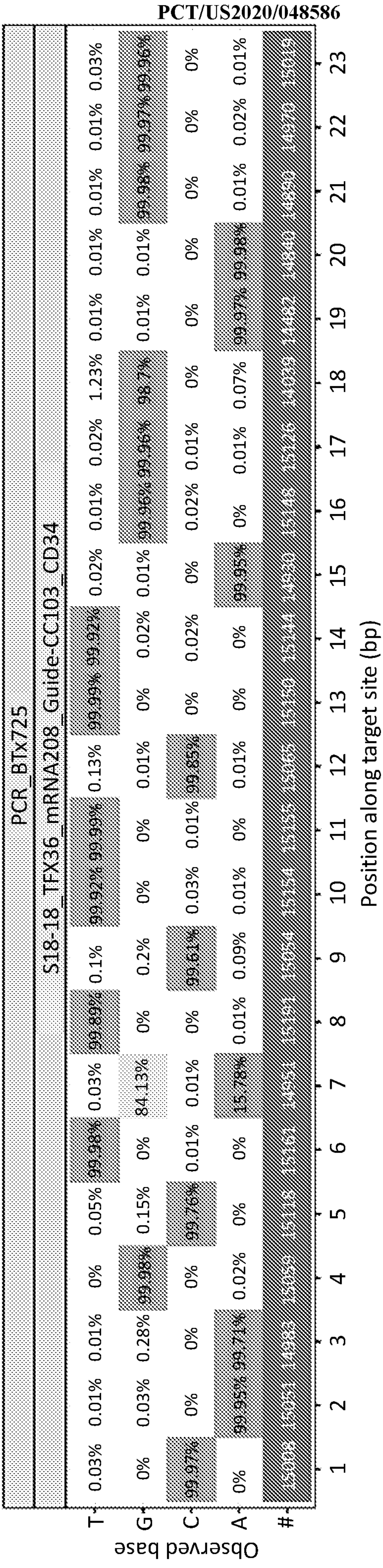


FIG. 12C

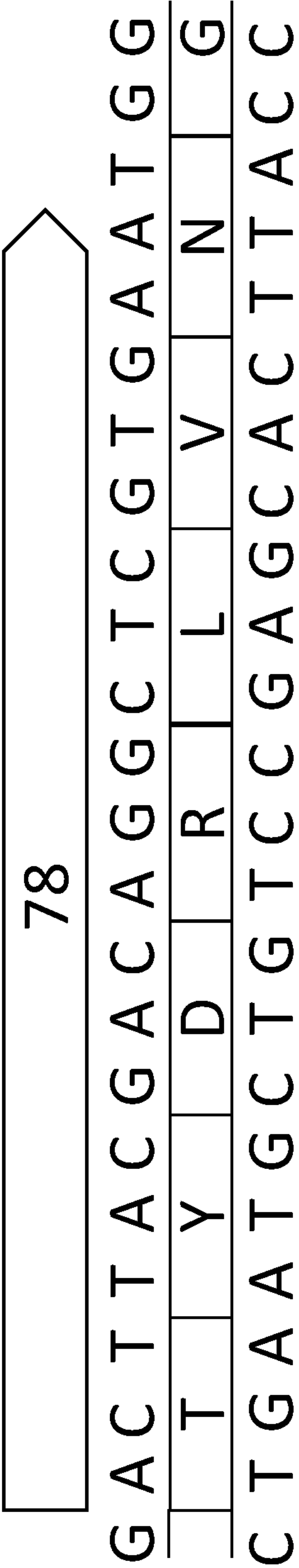


FIG. 12D

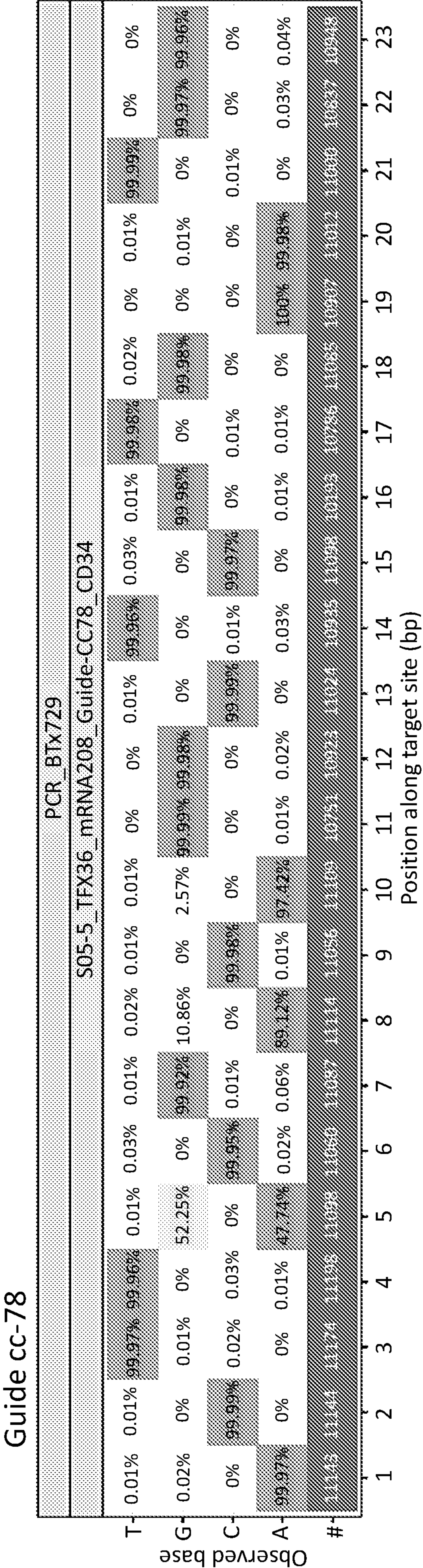


FIG. 12E



FIG. 12F

Guide cc-87

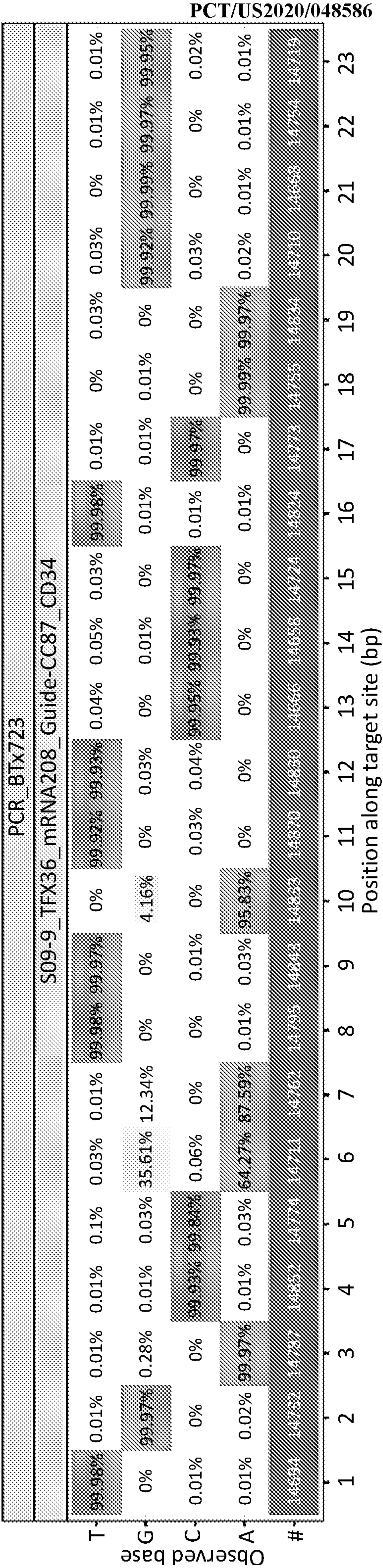


FIG. 12G

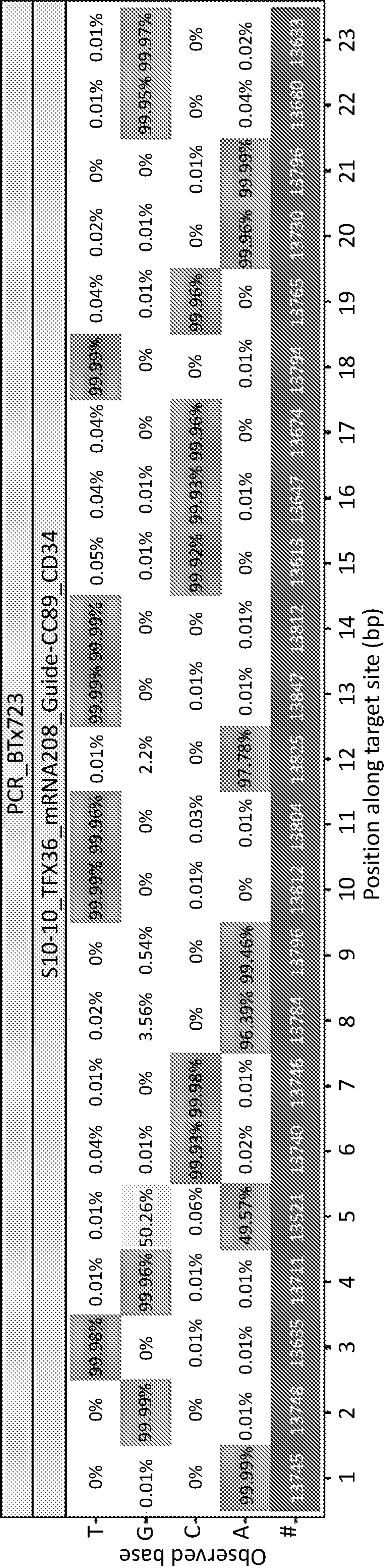


FIG. 12H

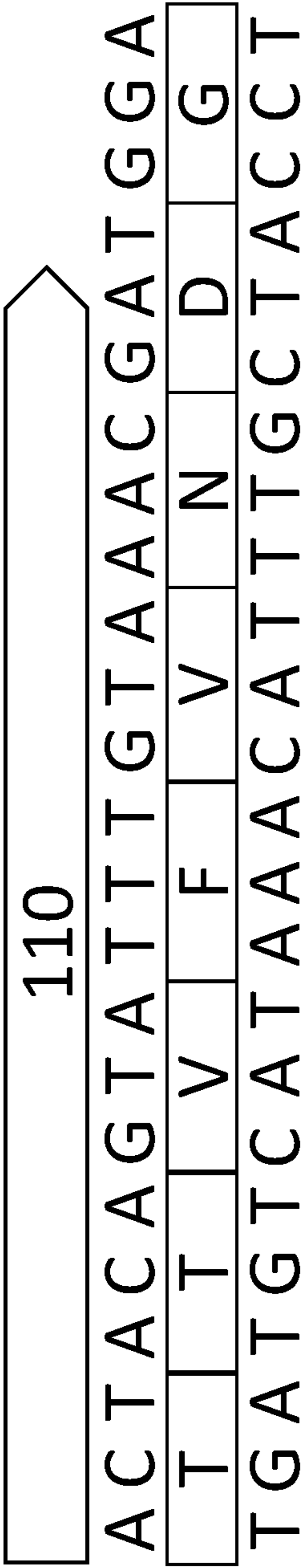


FIG. 12I

Guide cc-110

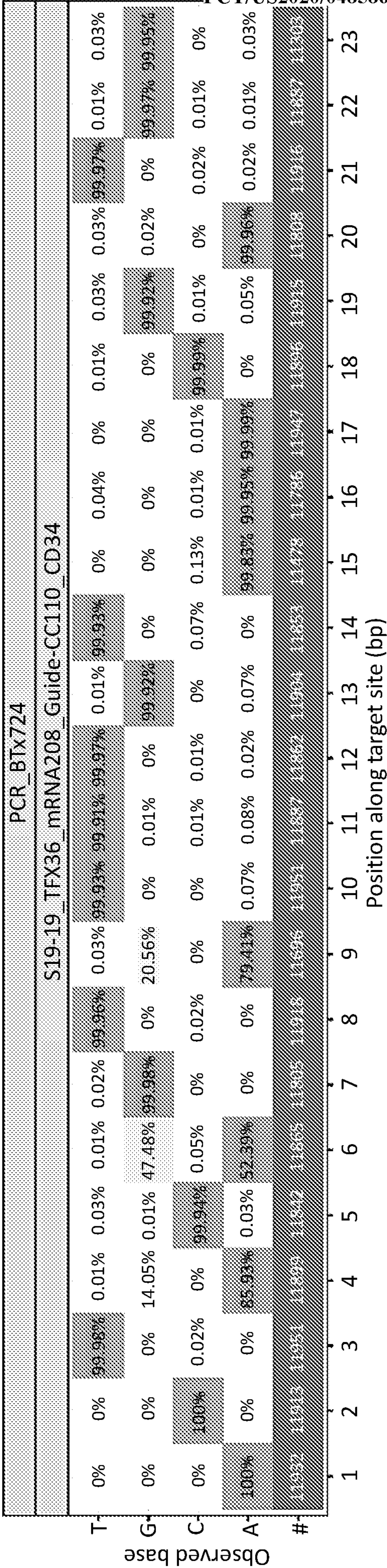


FIG. 12J

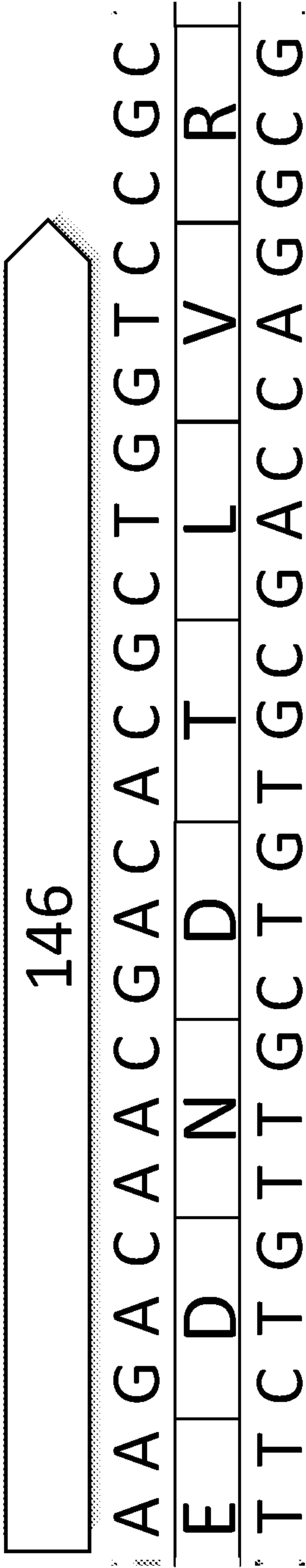


FIG. 12K

Guide cc-146

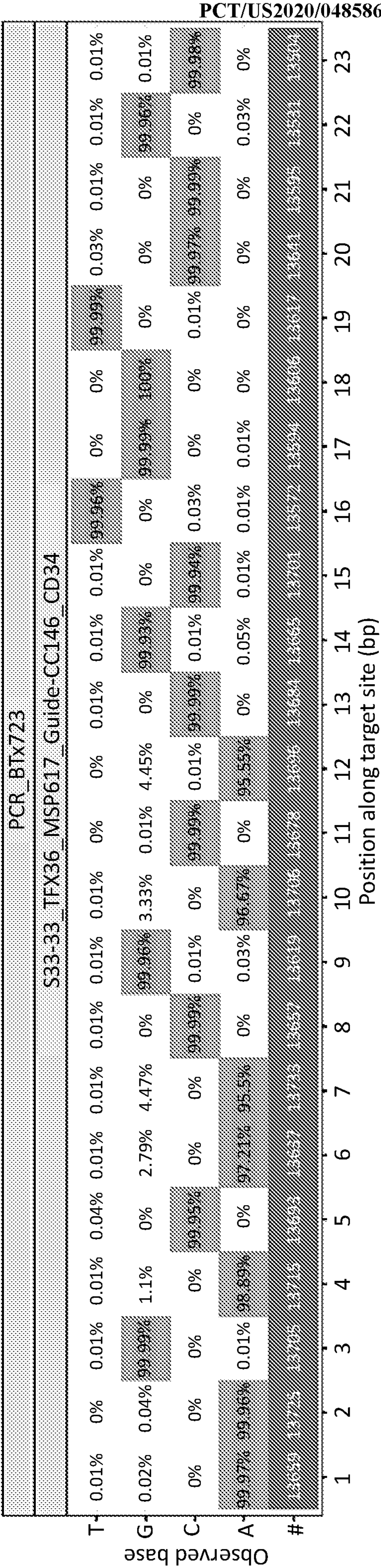


FIG. 12L

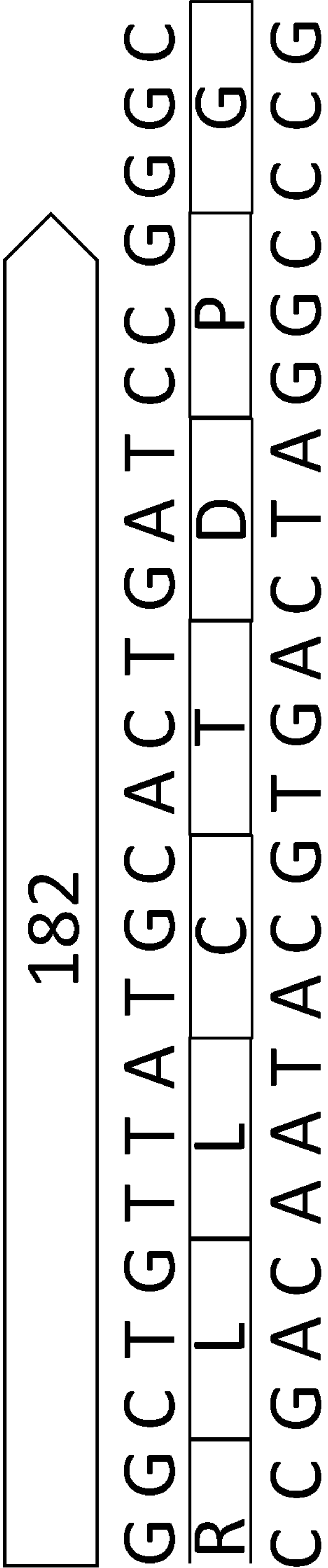


FIG. 12M

Guide cc-182

PCR_BIx728																							
S43-43_TFX36_MSP617_Guide-CC182_CD34																							
T	0.01%	0%	0.01%	99.99%	0.01%	99.97%	99.98%	0.01%	99.99%	0.01%	0.02%	0%	0.01%	99.97%	0.01%	0.01%	0.01%	0.01%	0.04%	0%	0.01%	0.01%	0.01%
G	99.99%	99.99%	0%	0%	99.97%	0.01%	0%	18.42%	0%	99.97%	0%	0.84%	0%	0%	99.96%	0.02%	0%	0%	0%	99.95%	99.96%	99.98%	0.01%
C	0%	0%	99.99%	0.01%	0%	0%	0.01%	0%	0.01%	99.96%	0%	99.99%	0.03%	0%	0%	99.99%	99.96%	0%	0.01%	0%	99.98%	0%	99.98%
A	0.01%	0.01%	0.01%	0%	0.02%	0.01%	0.01%	81.58%	0.01%	0.01%	0.02%	0%	99.16%	0%	99.97%	0%	0%	0%	0.01%	0.03%	0.01%	0.01%	0.01%
#	14240	14185	14225	14310	14187	13911	14205	14260	14150	14290	14203	14245	14231	14325	14321	14133	14115	14302	14254	14260	14263	14091	14135
Position along target site (bp)																							

FIG. 12N

