

C.

ELEGANS

2. C. elegans

2. C. elegans

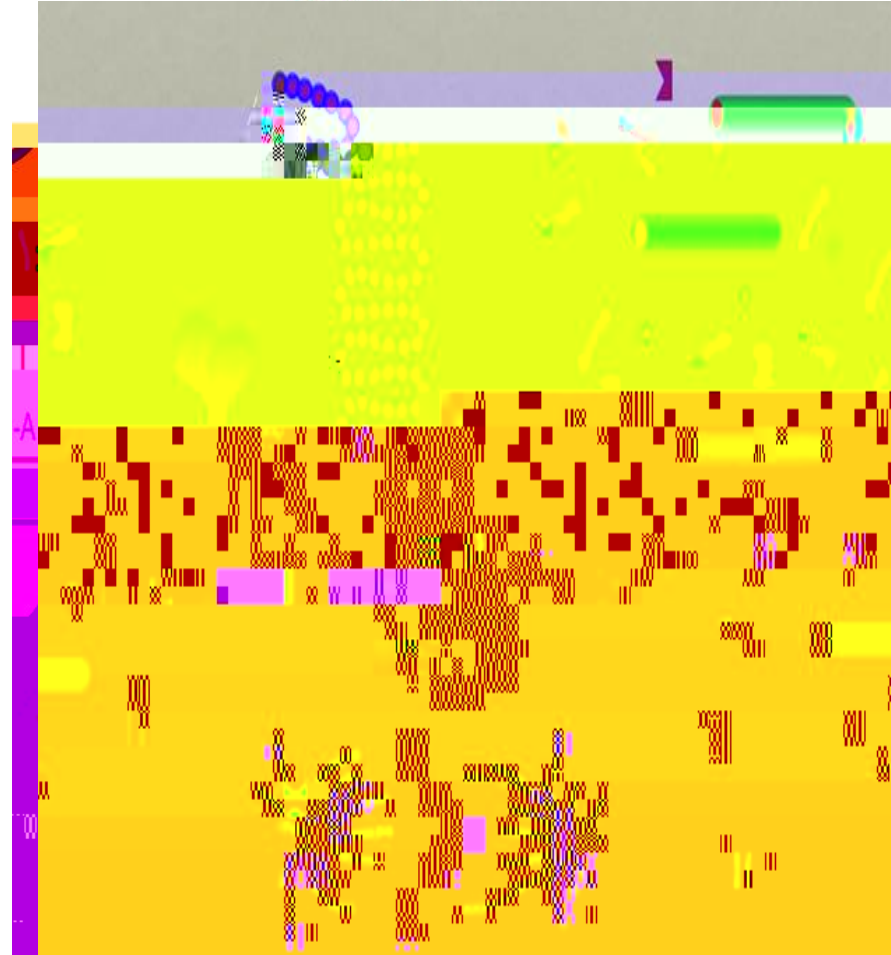


2. *C. elegans*

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C. elegans

C. elegans

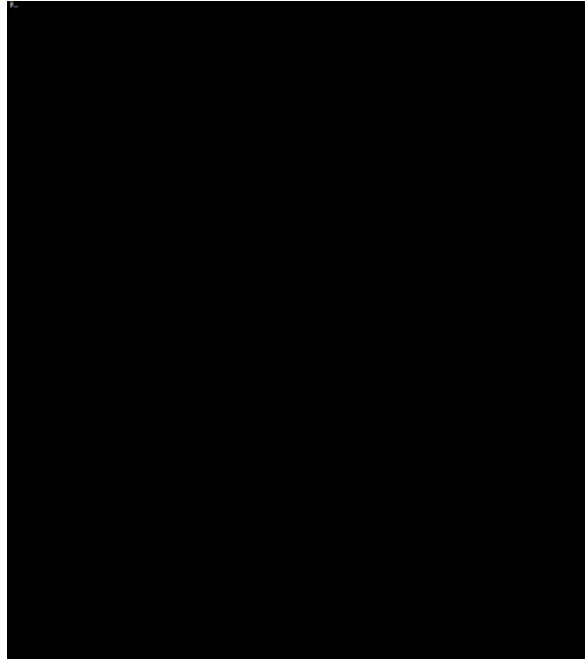


2. *C. elegans*

C. elegans

2. C. elegans

Allows us to visualize chromosomes, microtubules, and the CENP-A homologs in the developing embryo



https://commons.wikimedia.org/wiki/File:Immunofluorescence_Mechanism_.png

11-15

16-20

21-25

26-30

31-35

36-40

41-45

46-50

51-55

56-60

61-65

66-70

71-75

76-80

81-85

86-90

91-95

96-100

101-105

106-110

111-115

116-120

121-125

126-130

131-135

136-140

141-145

146-150

151-155

156-160

Wash with PBST

1-5, etc.)

antibodies (anti-HRP, etc.)
1) ribútin, etc.)

non-specific binding.

111-115

116-120

121-125

126-130

131-135

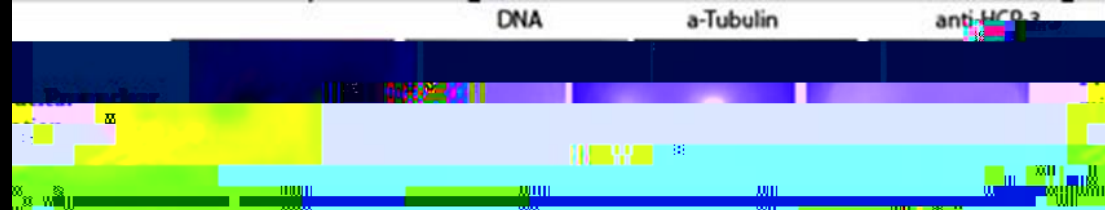
136-140

141-145

146-150

151-155

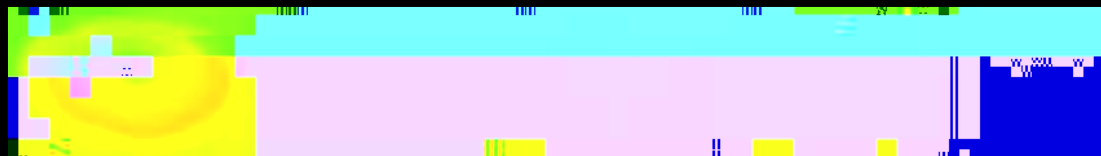
156-160



DNA

α -Tubulin

anti-HCP 3



DNA

α -Tubulin

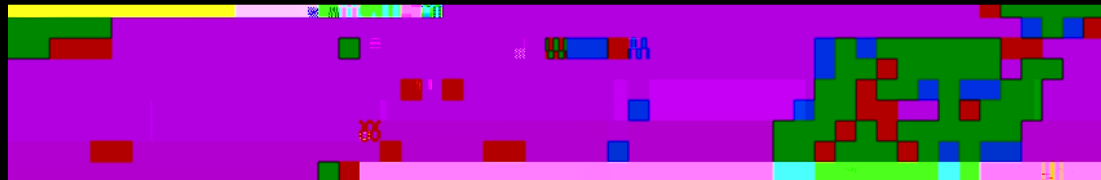
anti-HCP 3



DNA

α -Tubulin

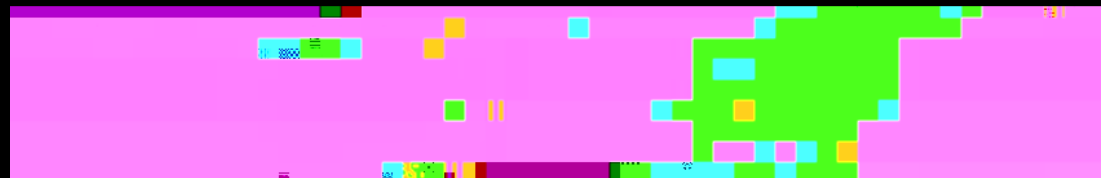
anti-MCP-3



DNA

α -Tubulin

anti-HCP 3



DNA

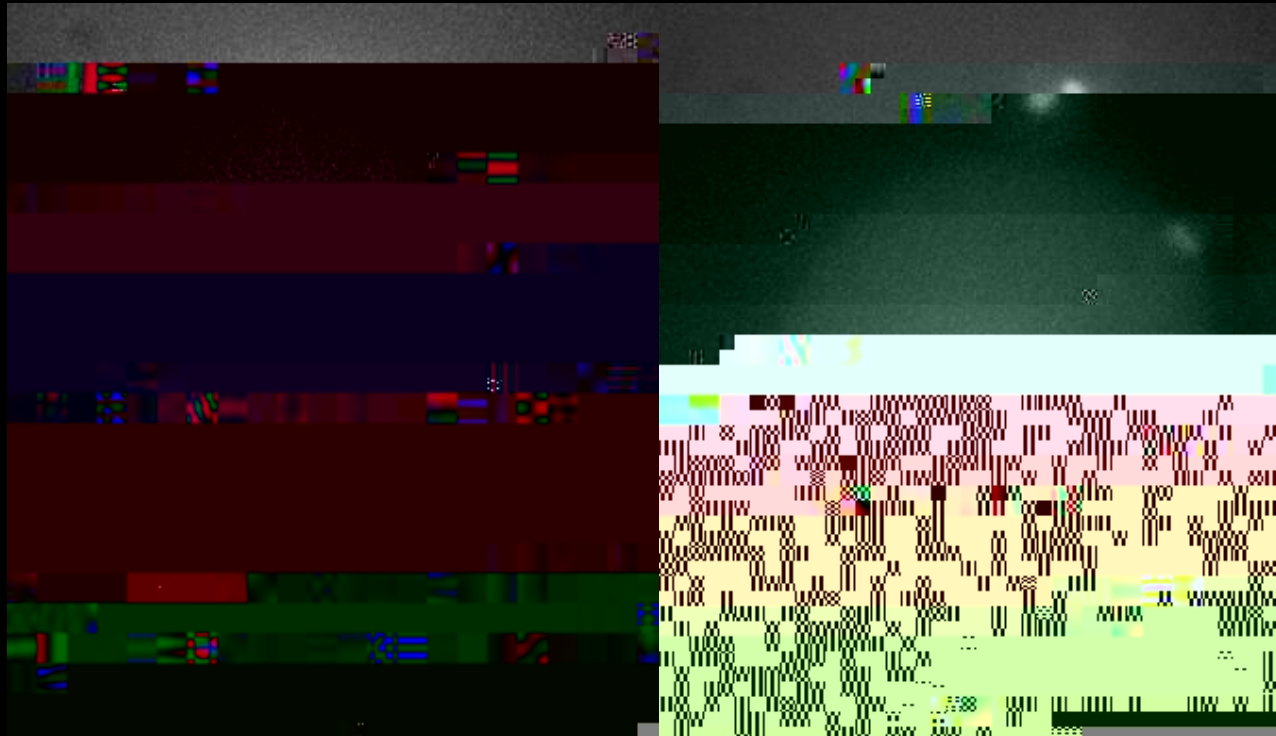
α -Tubulin

anti-HCP 3



Wild Type

RNAi knockdown



Anaphase

Type

ase

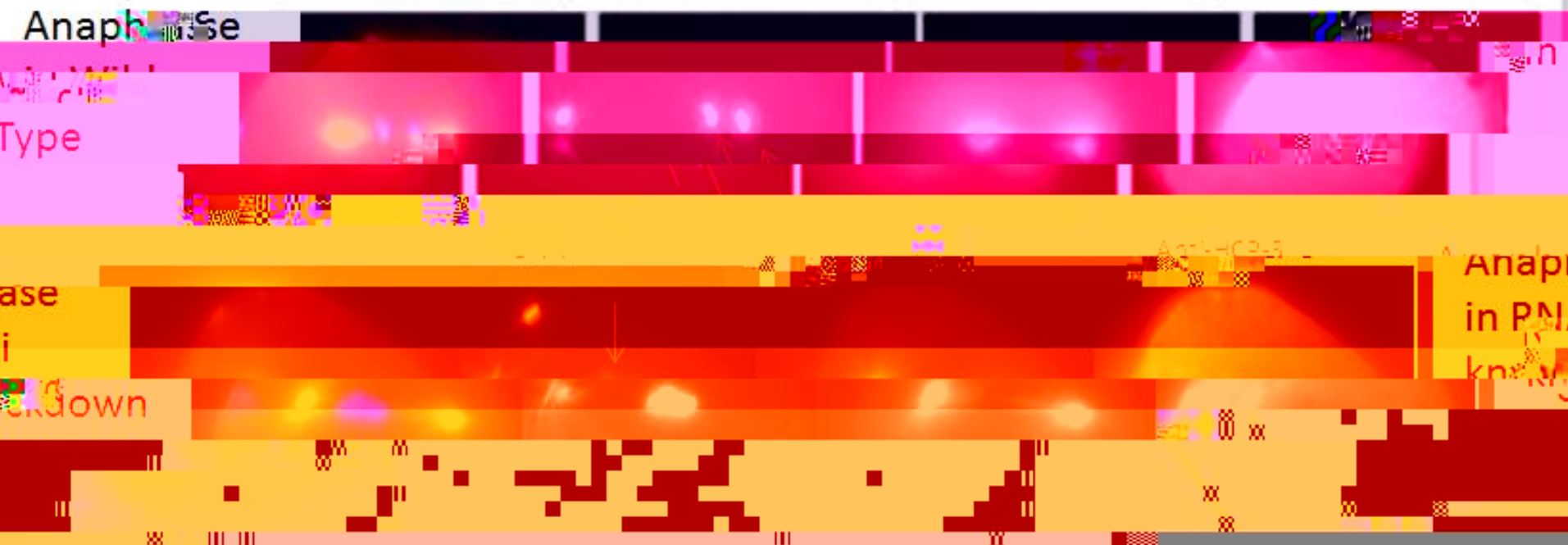
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Anap

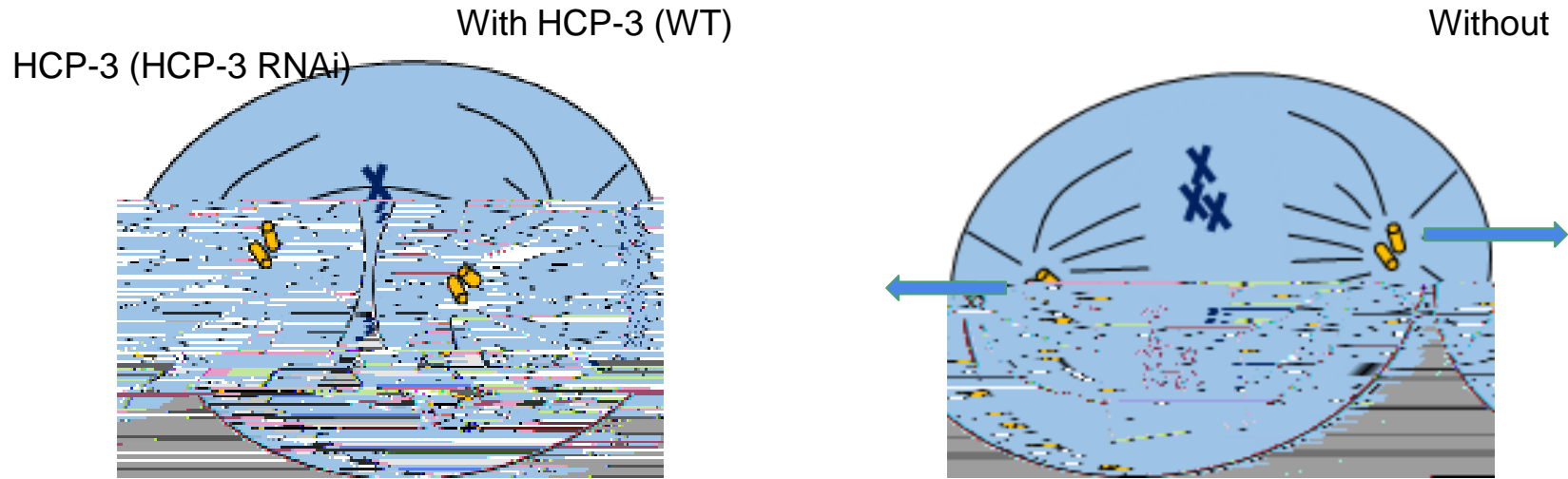
in PN

kn



2. C. elegans

HCP-3 localizes to the centromere in mitosis
Chromosome alignment and segregation is dependent on HCP-3
Embryos lacking HCP-3 result in aneuploidy and embryonic lethality



Perform similar experiment for CPAR-1

Localization of CPAR-1 in the embryo using CPAR-1 specific antibodies

Functional live imaging of CPAR-1 depleted embryos

Differential roles of HCP-3 and CPAR-1 will be examined to tease out

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