



DNA

BRCA1-BARD1

H4K20

DNA (DSB) DNA
DSB HR

NHEJ

H4K20(H4K20me0) DNA

HR

BRCA1-BARD1

H4K20me0

HR

¹

CDK

S

HR

(

) ()

DSB

H4K20me0

HR

²

H4K20me0

DNA

DNA

DNA

NCC³

SILAC-MS

()

ATM

kinase

DNA

DNA

HR