



Reimagined
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Society for Immunotherapy of Cancer

Reversal of epigenetic silencing of cGAS and STING in melanoma enhances the activity of tumor infiltrating lymphocytes

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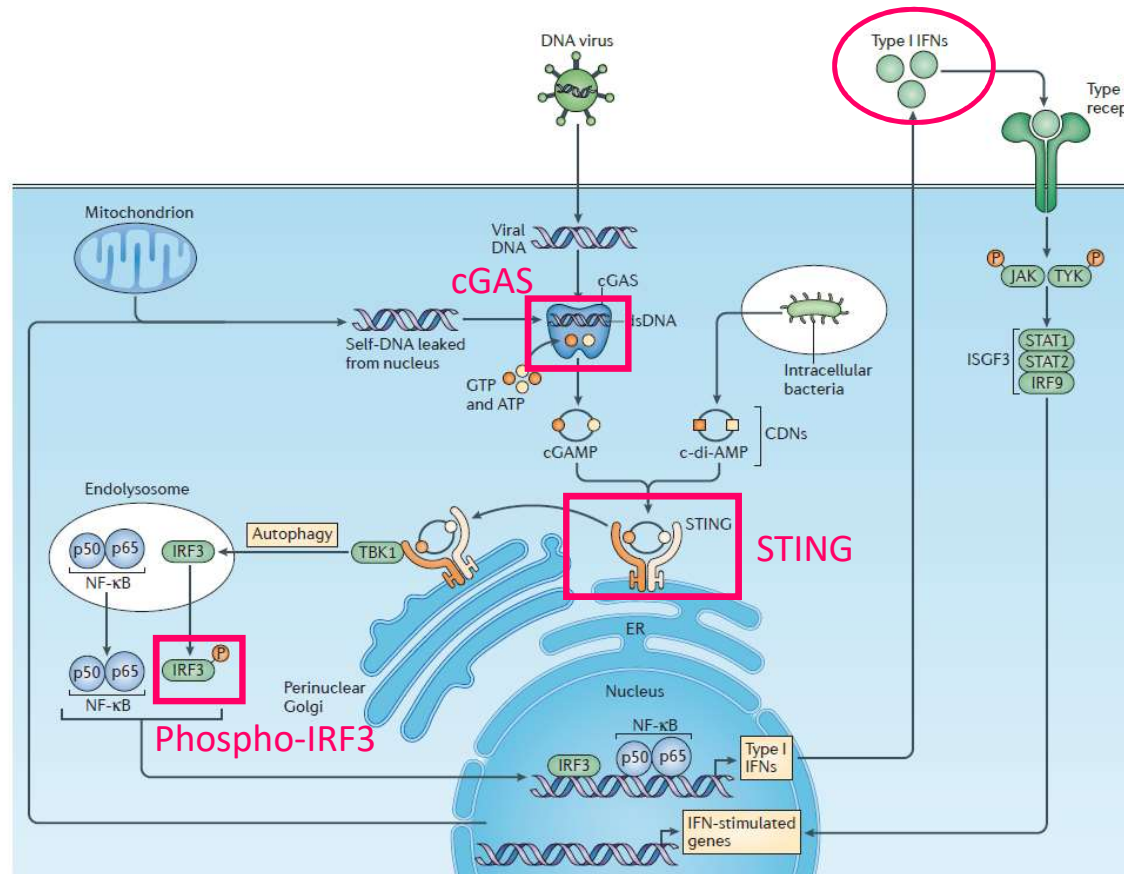
Society for Immunotherapy of Cancer

#SITC2020

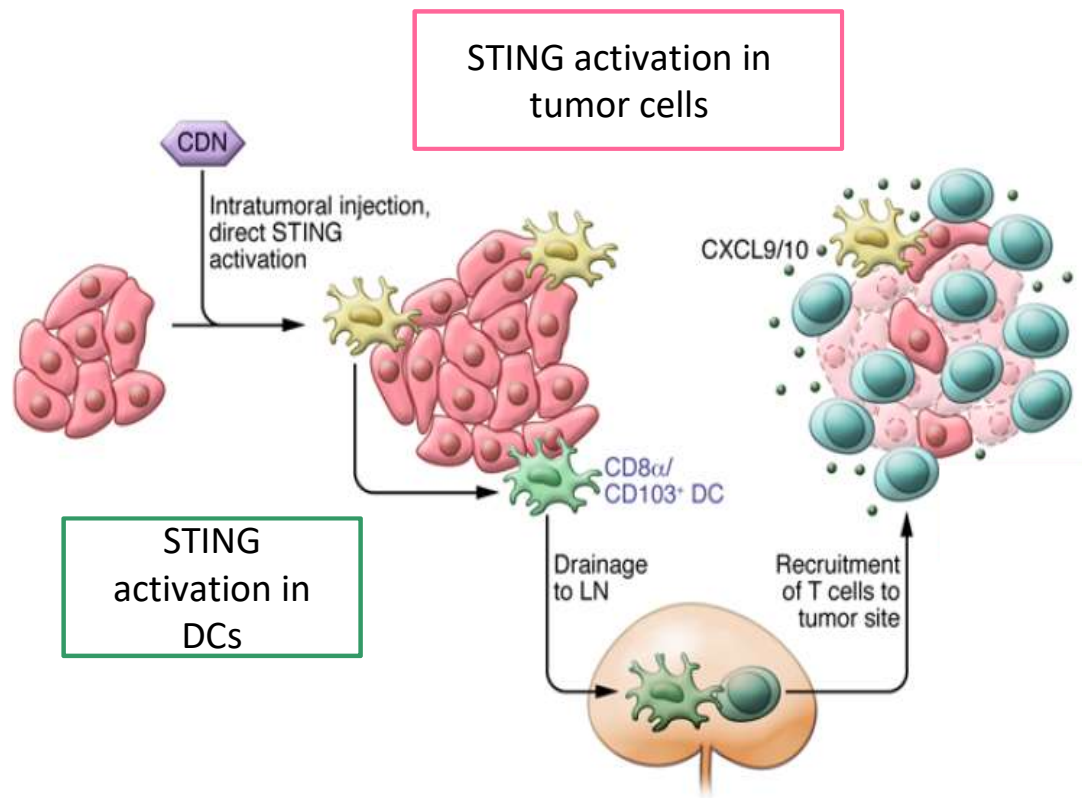


I have NO relevant financial disclosures.

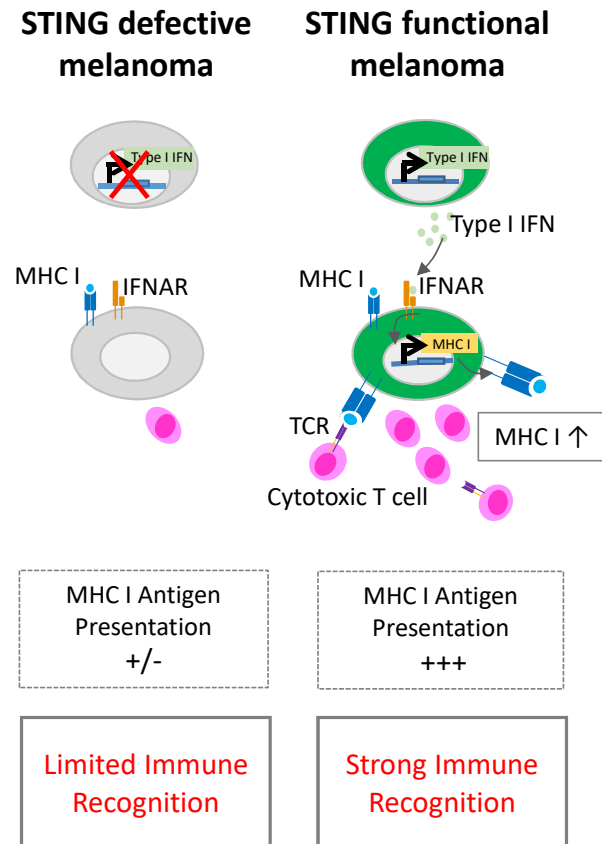
STING-dependent innate immune signaling



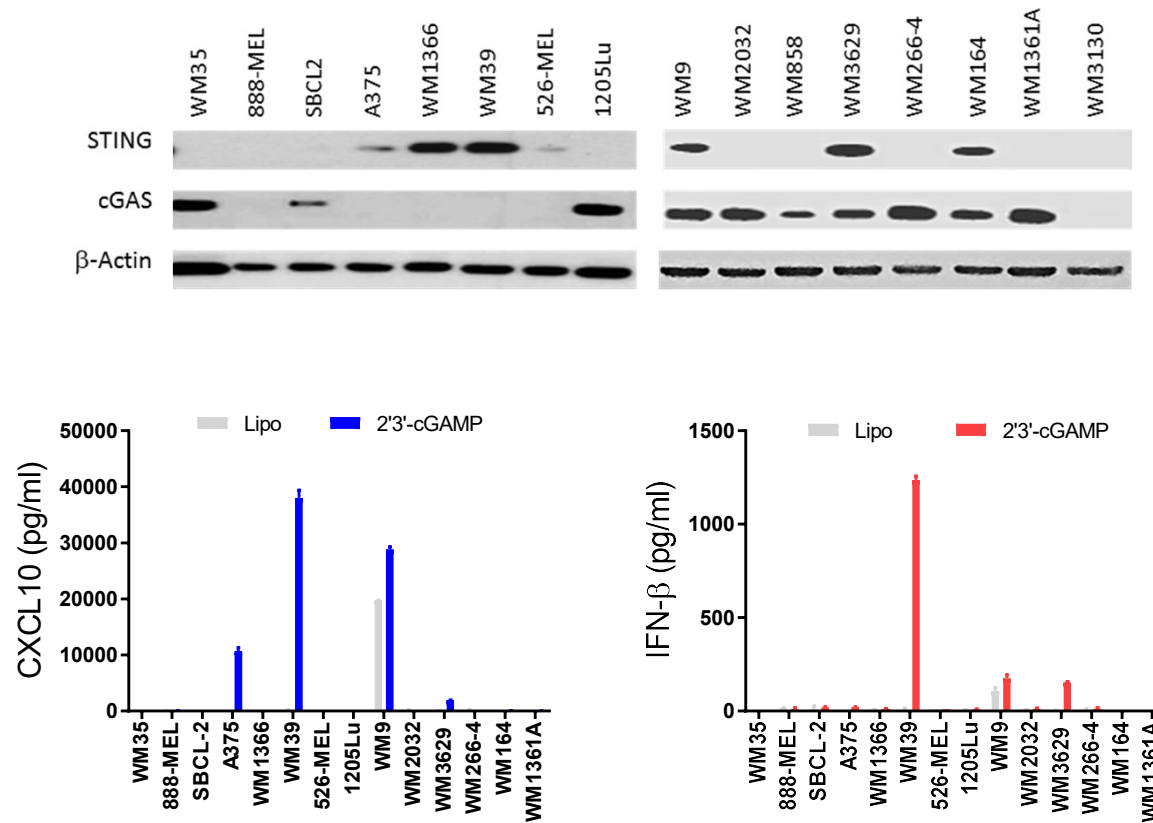
STING signaling in antitumor immunity



Activation of STING signaling results in enhanced antigenicity of human melanoma cell lines

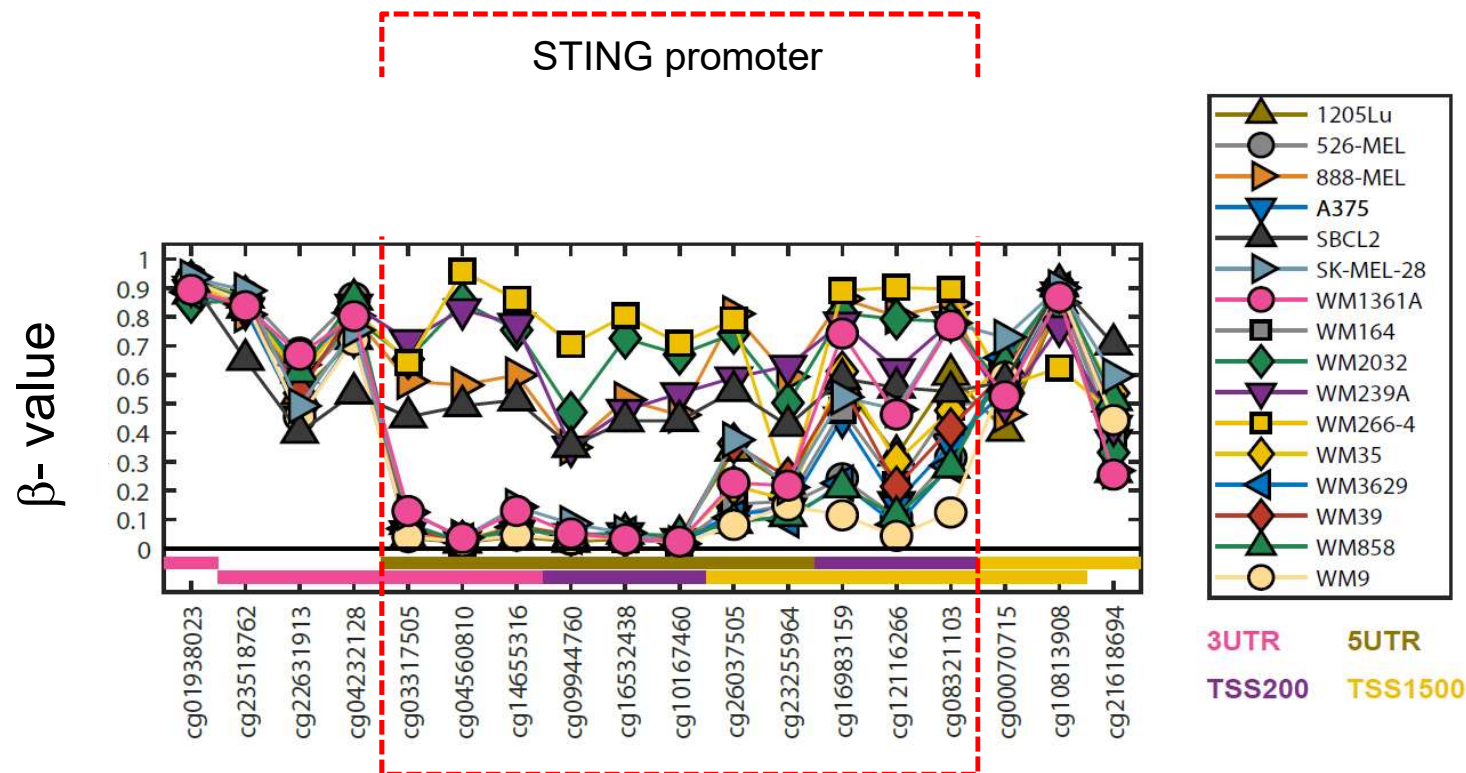


STING signaling is suppressed in a large subset of human melanoma cell lines

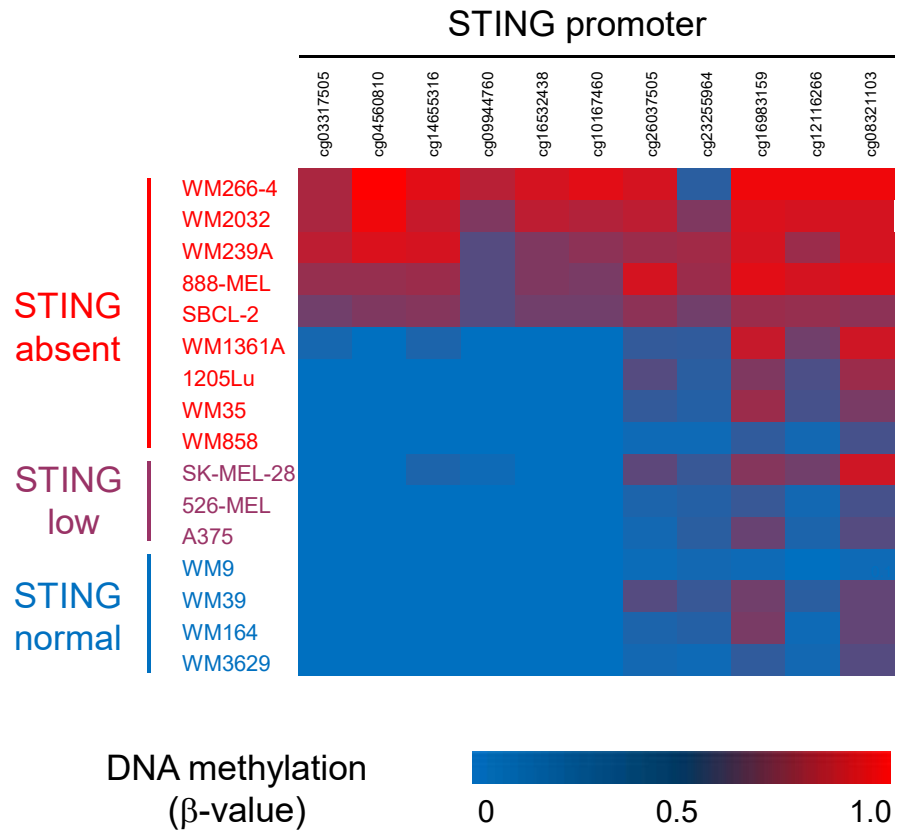
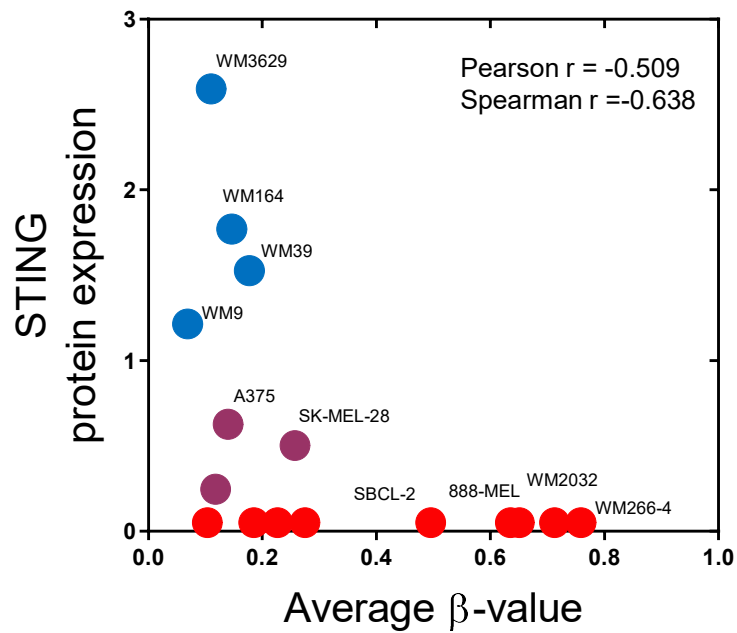


Does promoter hypermethylation silencing mediate suppression of STING activity in melanoma cells?

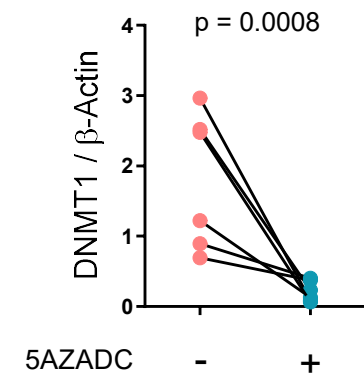
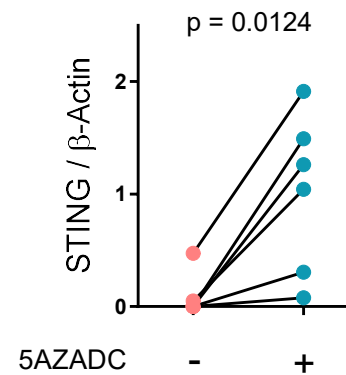
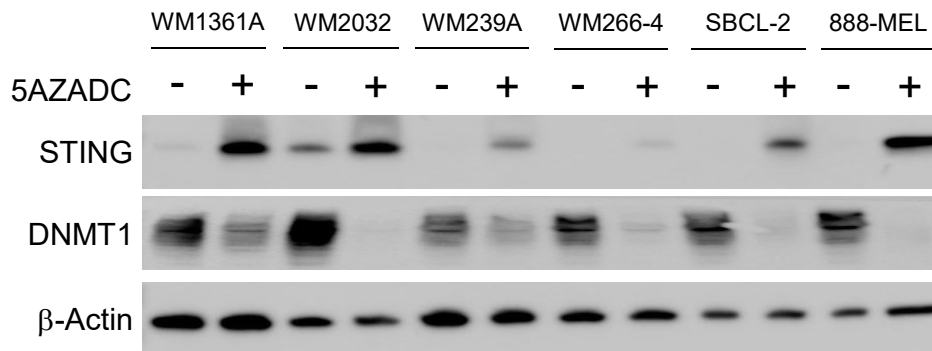
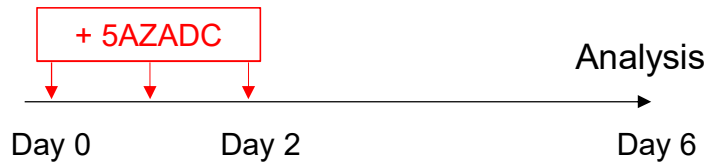
Whole genome methylation profiling identifies a distinct inverse correlation between promoter hypermethylation and expression of STING in human melanoma cell lines.



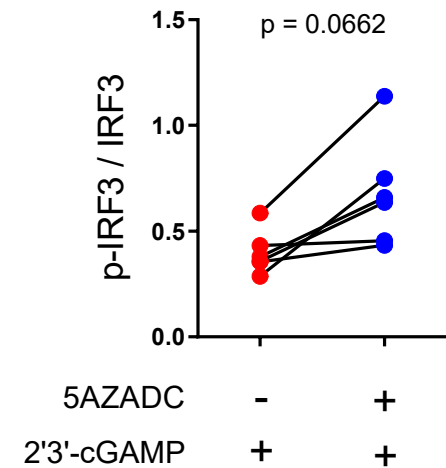
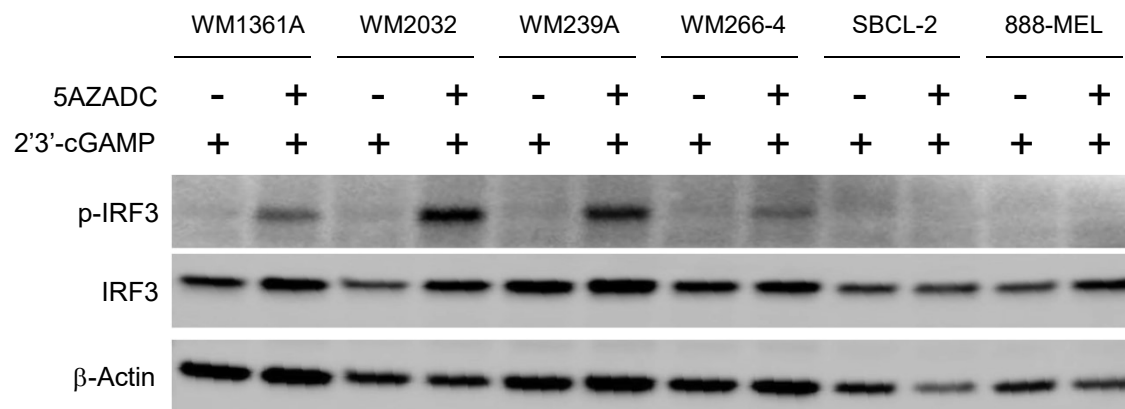
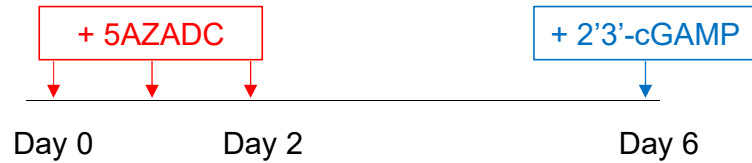
Inverse correlation between promoter hypermethylation and expression of STING in human melanoma cell lines



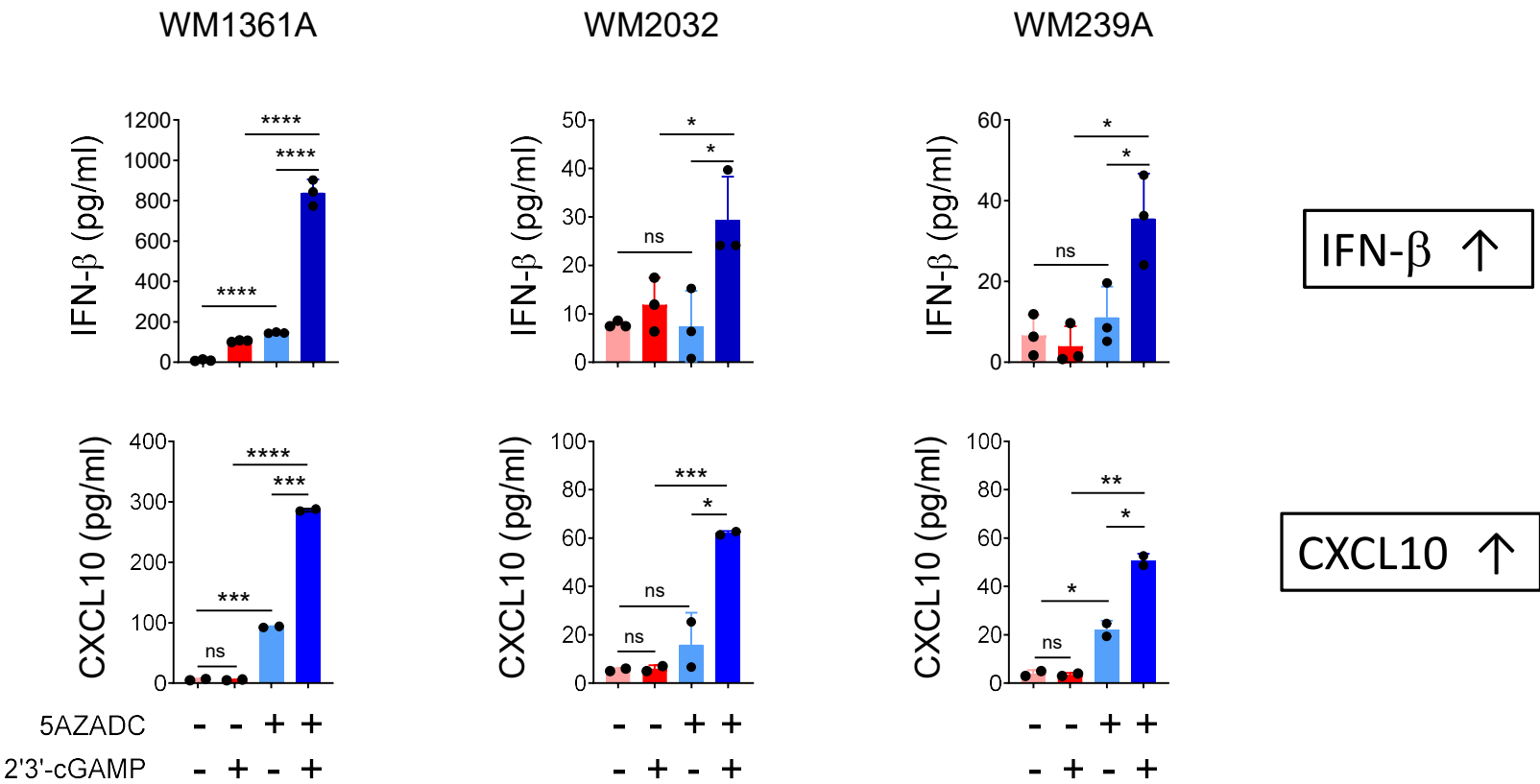
DNA demethylation can restore STING expression in human melanoma cell lines



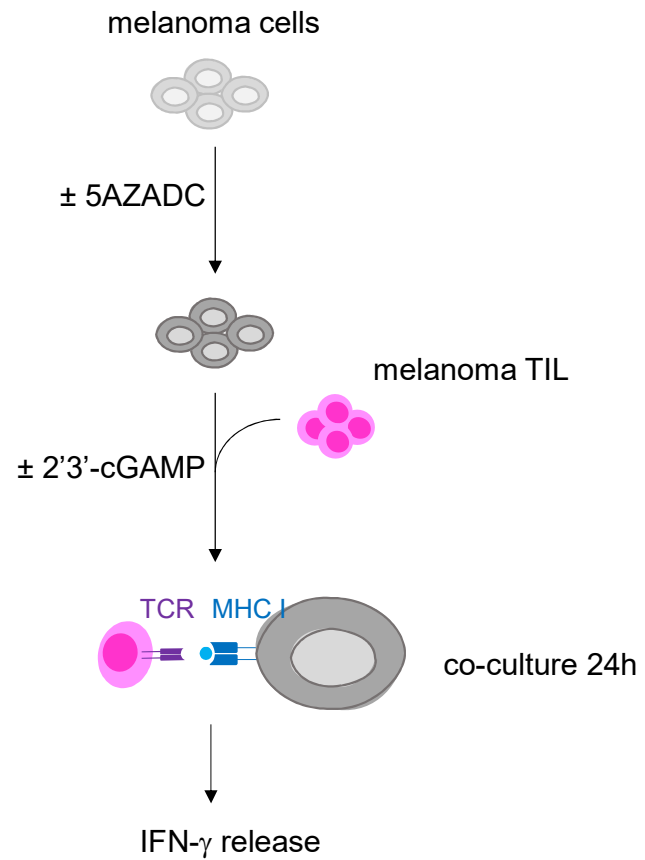
DNA demethylation can rescue STING signaling in human melanoma cell lines



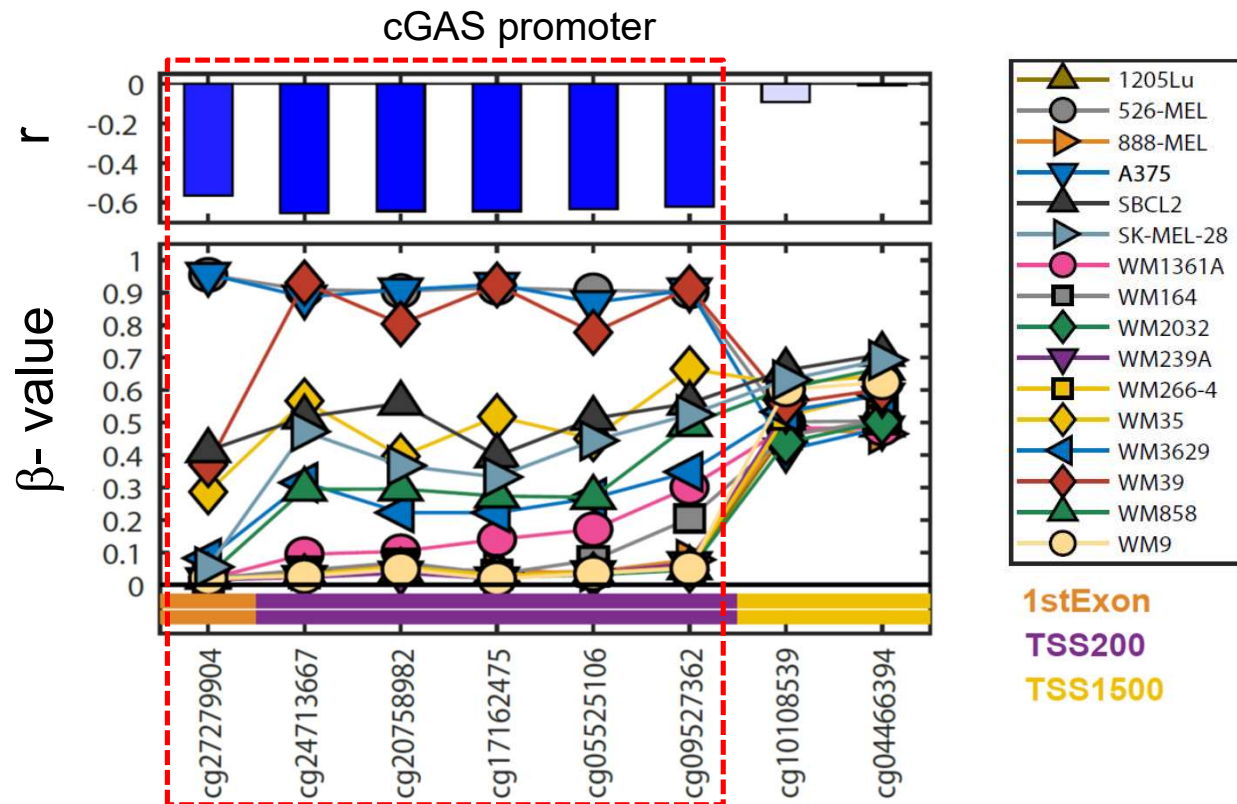
DNA demethylation can rescue STING signaling in human melanoma cell lines



Activation of STING signaling in epigenetically reprogrammed melanoma cells results in enhanced antigenicity

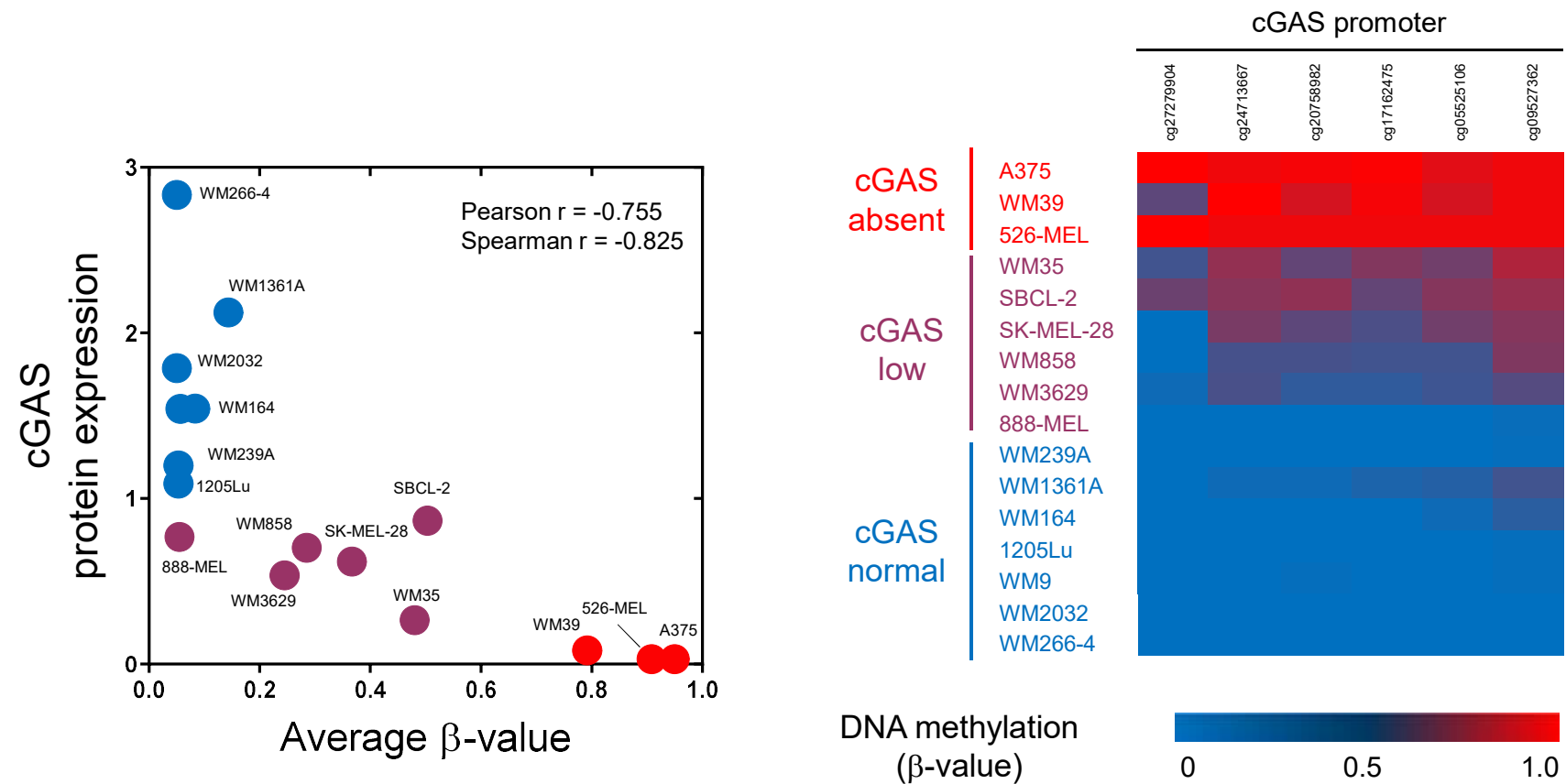


Whole genome methylation profiling identifies a distinct inverse correlation between promoter hypermethylation and expression of cGAS in human melanoma cell lines.

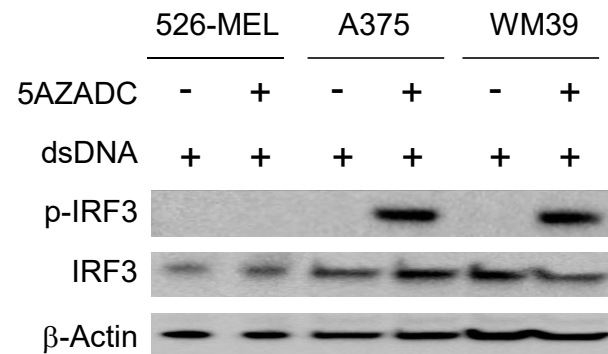
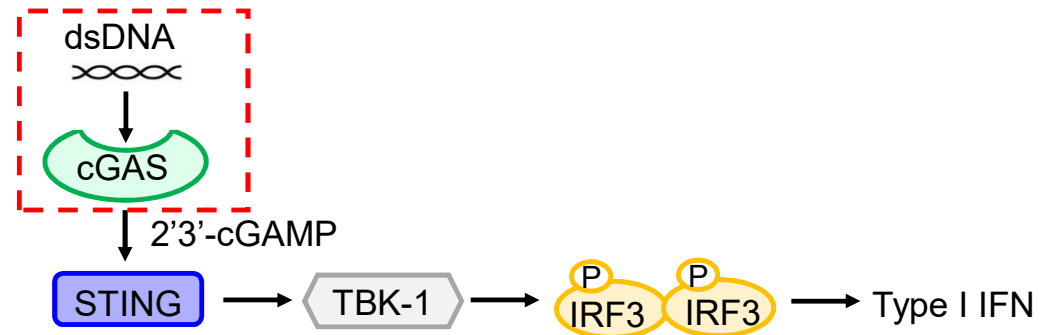
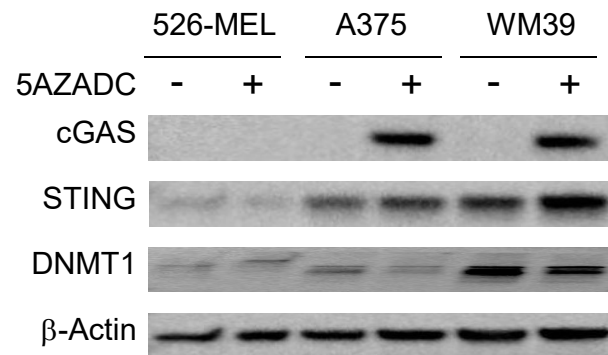


r = degree of correlation between β -value and cGAS protein expression

DNA hypermethylation silences cGAS expression in human melanoma cell lines

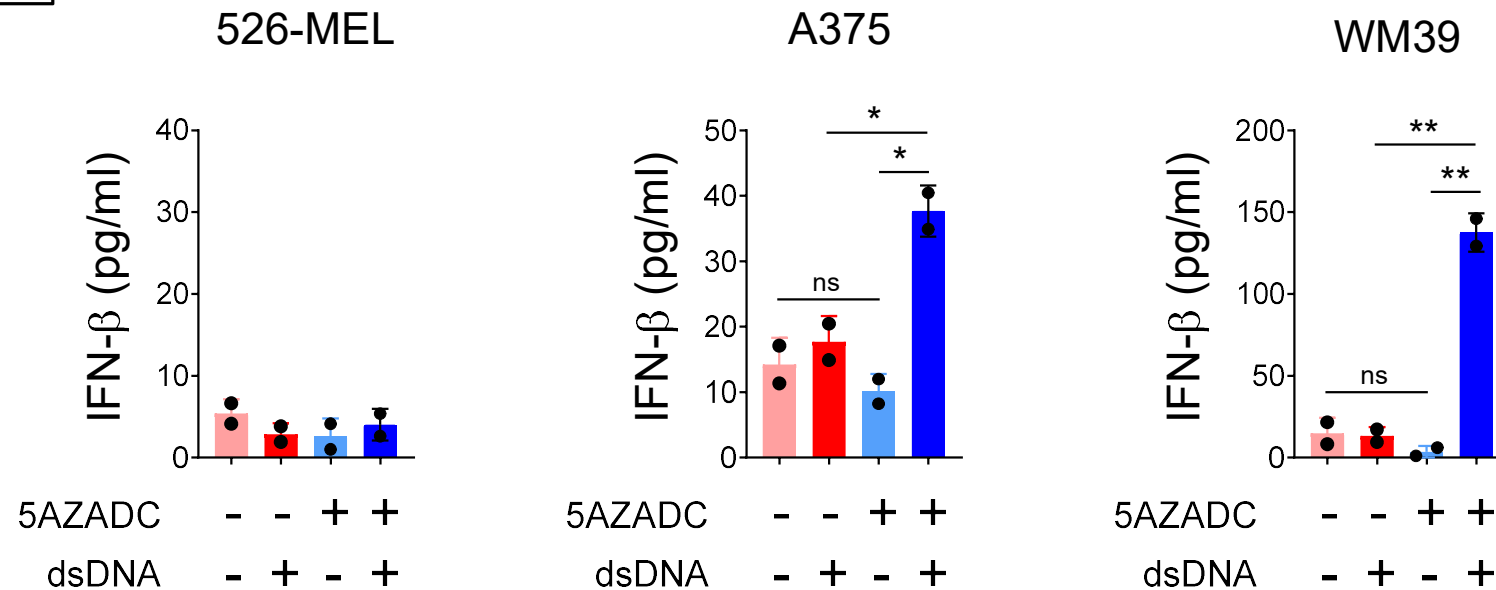


DNA demethylation can restore cGAS-dependent STING activation



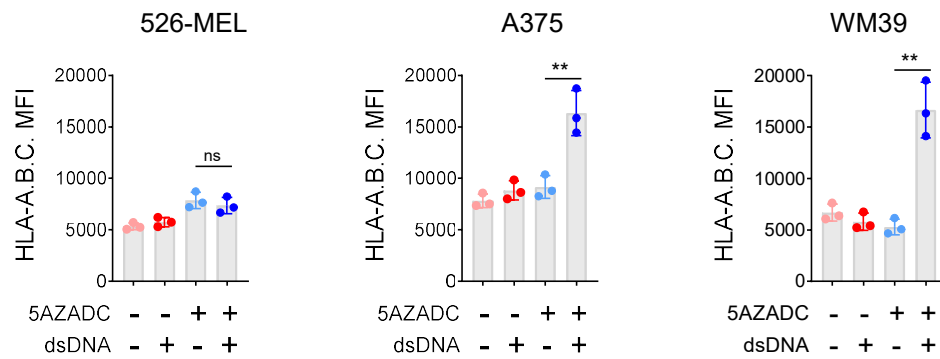
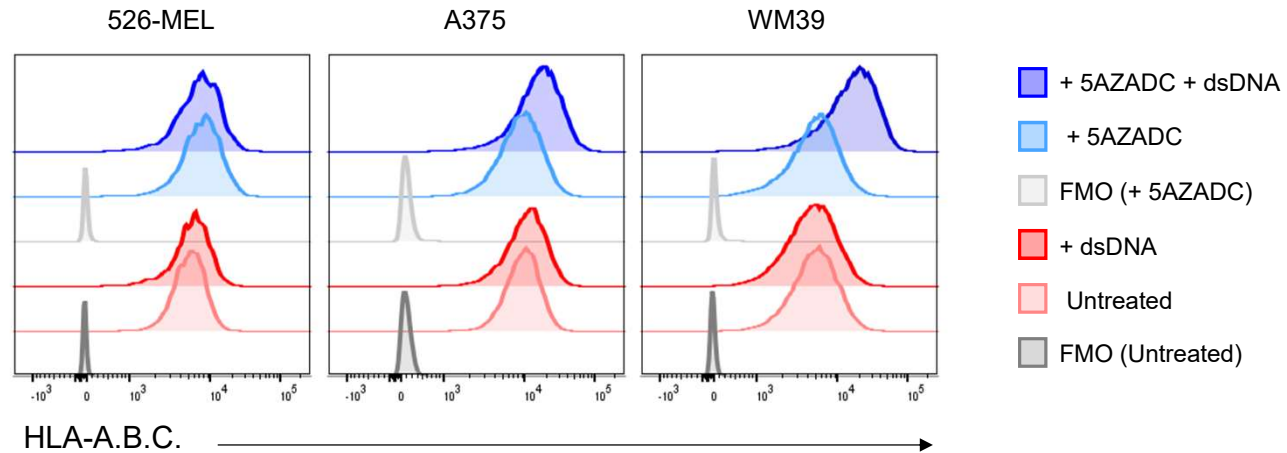
DNA demethylation can restore cGAS-dependent STING activation

IFN- β

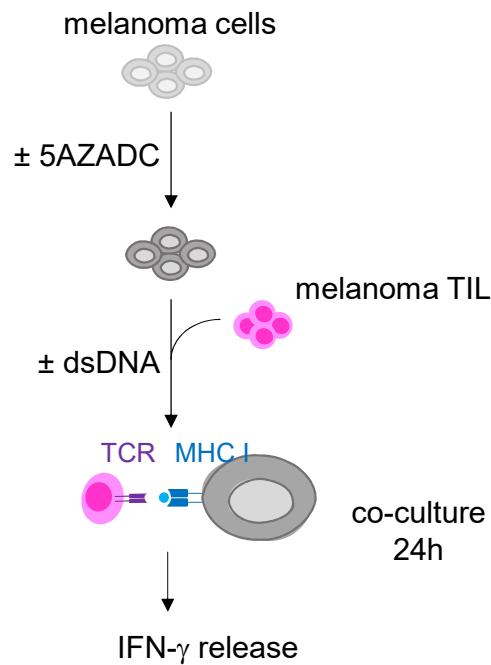


DNA demethylation can restore cGAS-dependent STING activation

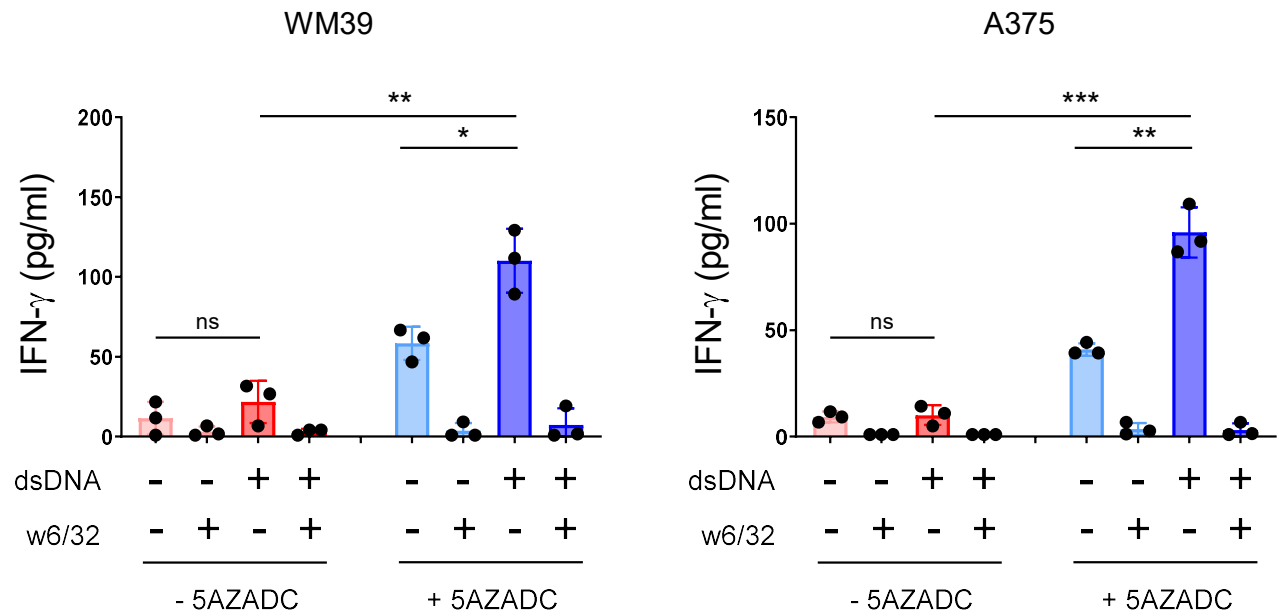
MHC I



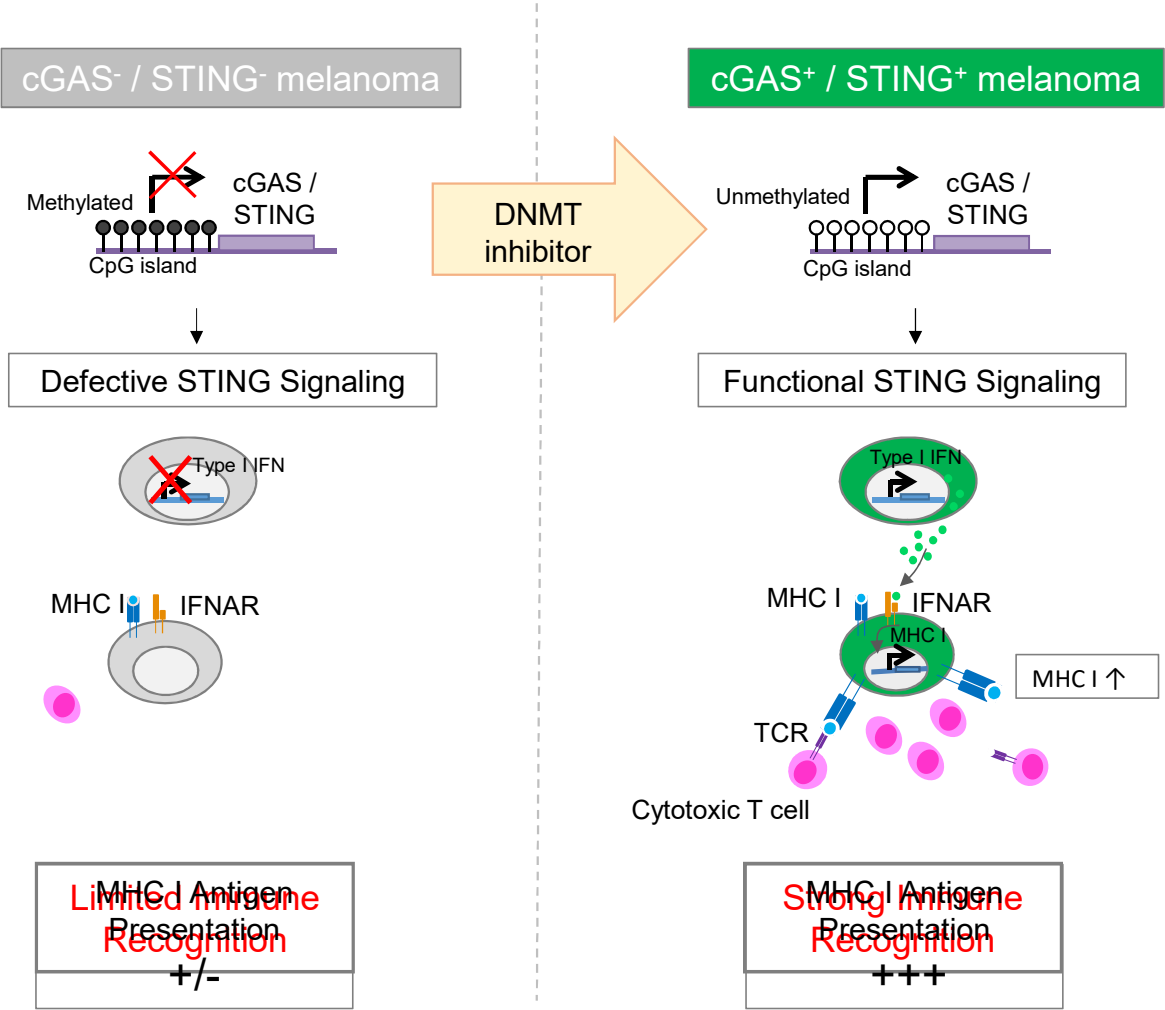
Activation of cGAS-dependent STING signaling in epigenetically reprogrammed melanoma cell lines results in enhanced antigenicity



Melanoma/TIL co-culture



Summary



ACKNOWLEDGEMENTS

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