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ARTICLE INFO

Article history:

Keywords:

ABSTRACT

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2. Materials and methods

2.1. Vaccine formulations

2.2. Tumor cell line

2.3. Tumor model and vaccination

2.4. CTL assay

2.5. Elispot assay of IFN-γ- and IL-10-secreting cells

2.6. Flow cytometry for Treg cells

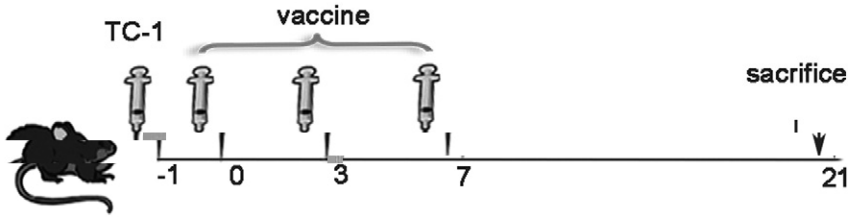

Fig. 1.

2.7. IgG and isotypes

2.8. mRNA expression of IL-10, VEGF, STAT3 and IFN-γ in tumors

Table 1

-10	-o
- -γ	-o
-	-o
-	-o
β-	-o

2.9. Statistical analysis

3. Results

3.1. Docetaxel and HPV-LFP synergistically suppress tumor growth

3.2. Docetaxel and HPV-LFP synergistically increase the survival of mice inoculated with TC-1 cells

3.3. Docetaxel and HPV-LFP synergistically activate CTL cells

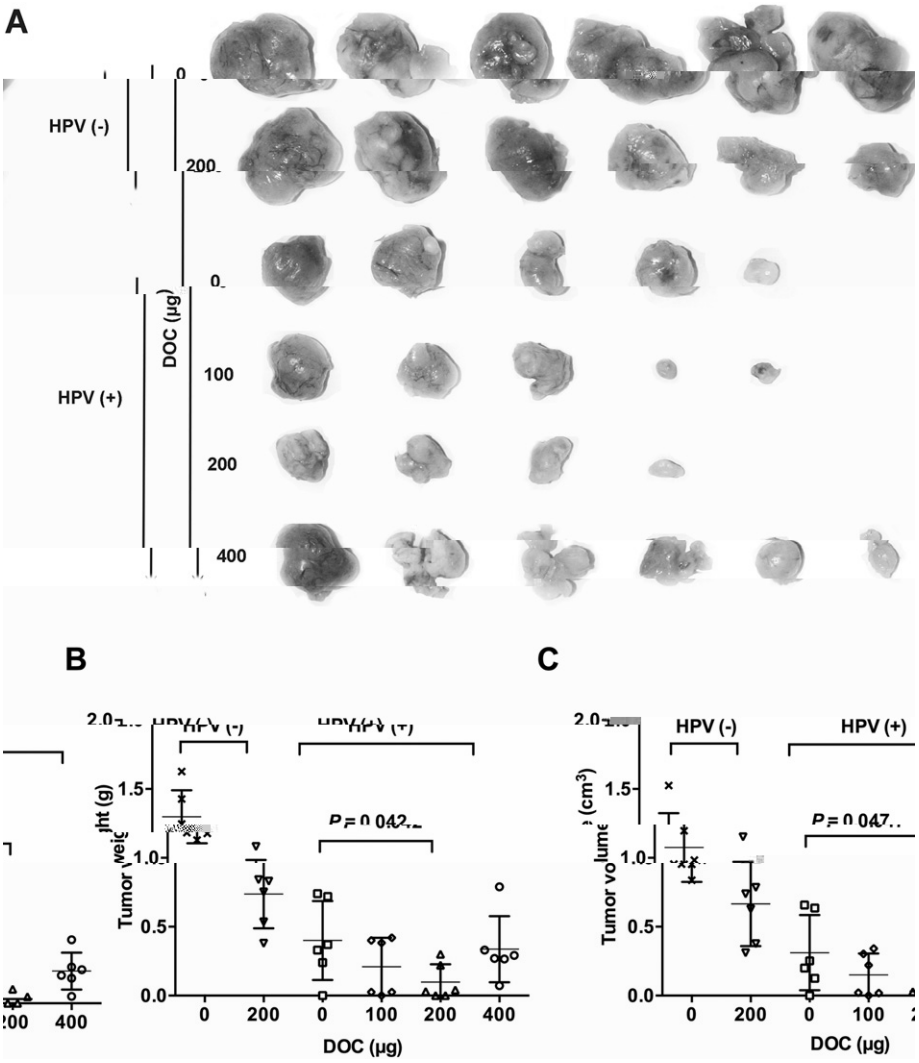

Fig. 2. o o o - o o o (−6 / o) . . o 10 o -1 o o . . o o 00μ o o o o (00μ) ((−)), o 1 0μ o - 00μ o o o (0, 100, 00, 00μ) ((+)) o 0, . , o o o o o 1. , o . . ( ) , o o o . . ( ). *P* ≤ 0.0 fi .

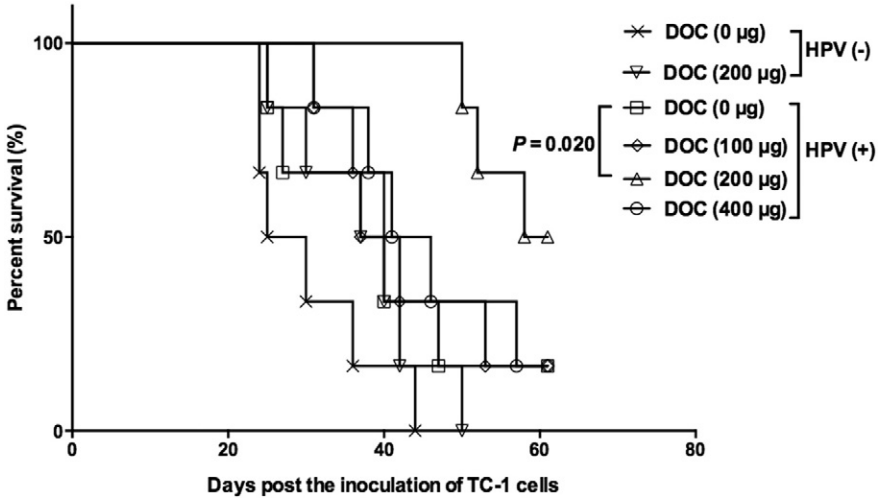

Fig. 3. o o o - (−6 / o) o . 1. o o o . . *P* ≤ 0.0 fi .

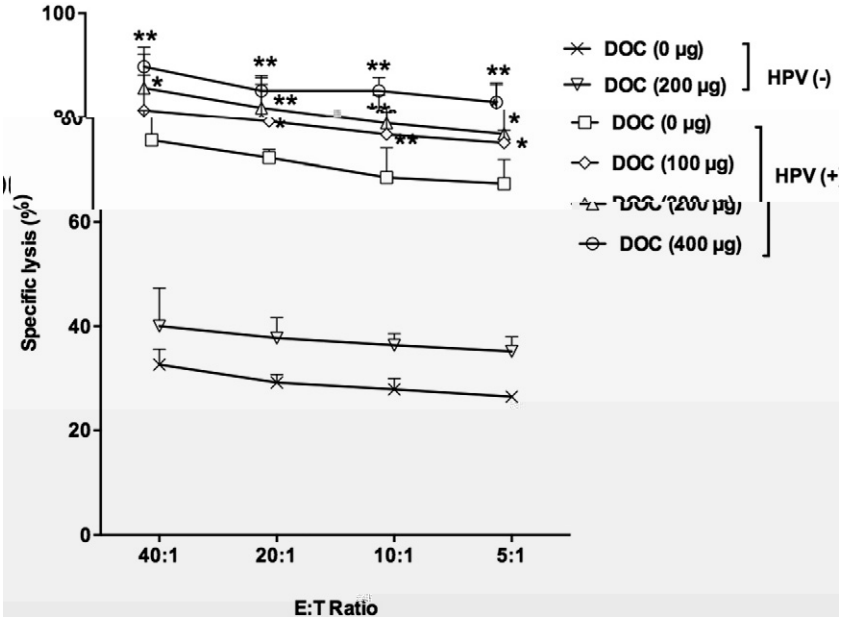

Fig. 4. -1 . (—6 / o) o . 1. o o 1. o o (10) 6 – _- (10μ /) o 00 / o - o , (-1) o 6 o o o o (/) o 0 1, 0 1, 10 1 1, . o fi o o o . o . . * ** o o - o *P* ≤ 0.0 *P* ≤ 0.01, .

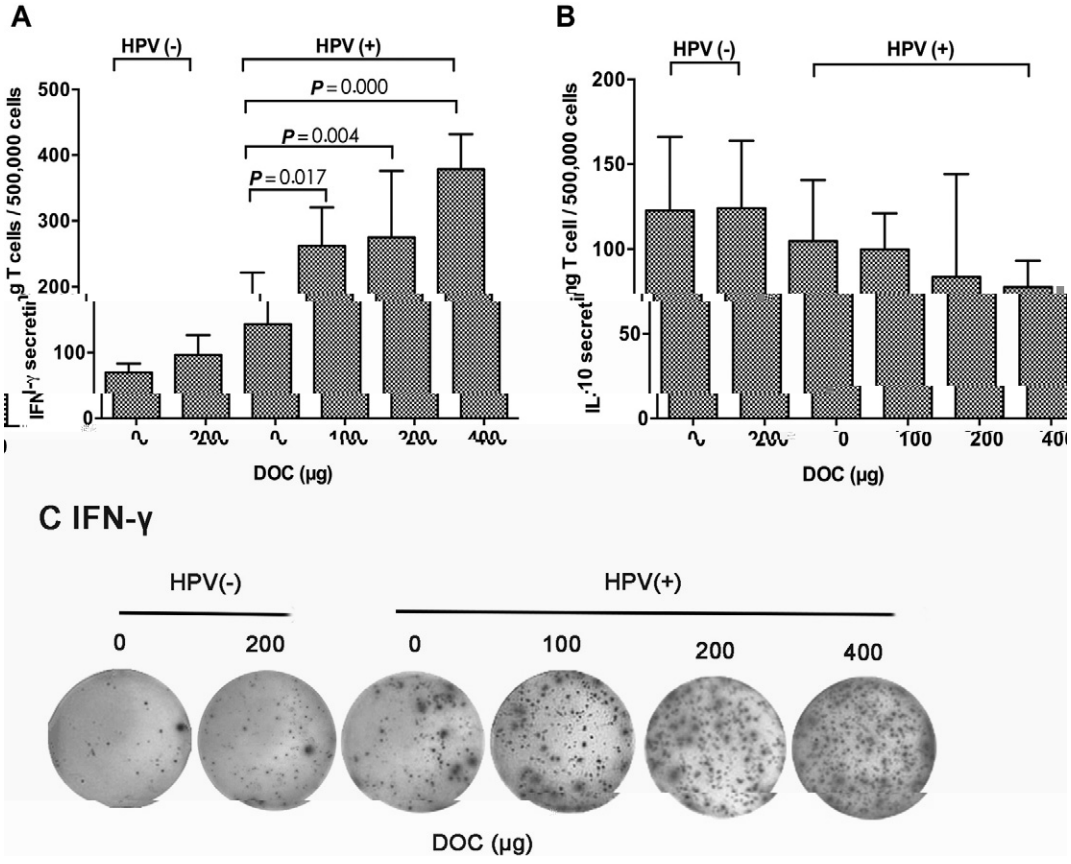

Fig. 5. -γ -10 . (—6 / o) o . 1. o o 1. (10 /) 6 – _- o (o -γ) o (o -10) o (o -γ) o (o -10) – % ! o -γ ( ) o -10 ( ) o o . . (/ 00,000). *P* ≤ 0.0 fi .

3.4. Docetaxel and HPV-LFP synergistically increase IFN-γ and decrease IL-10 secreting cells

3.5. Docetaxel enhances HPV-LFP-elicited antibody responses

3.6. Docetaxel decreases Treg cells in $CD4^+$ splenocytes

3.7. Docetaxel decreases Treg cells in tumors

3.8. Docetaxel and HPV-LFP synergistically up-regulate IFN-γ and down-regulate IL-10, VEGF and STAT-3 mRNA expression in tumors

4. Discussion

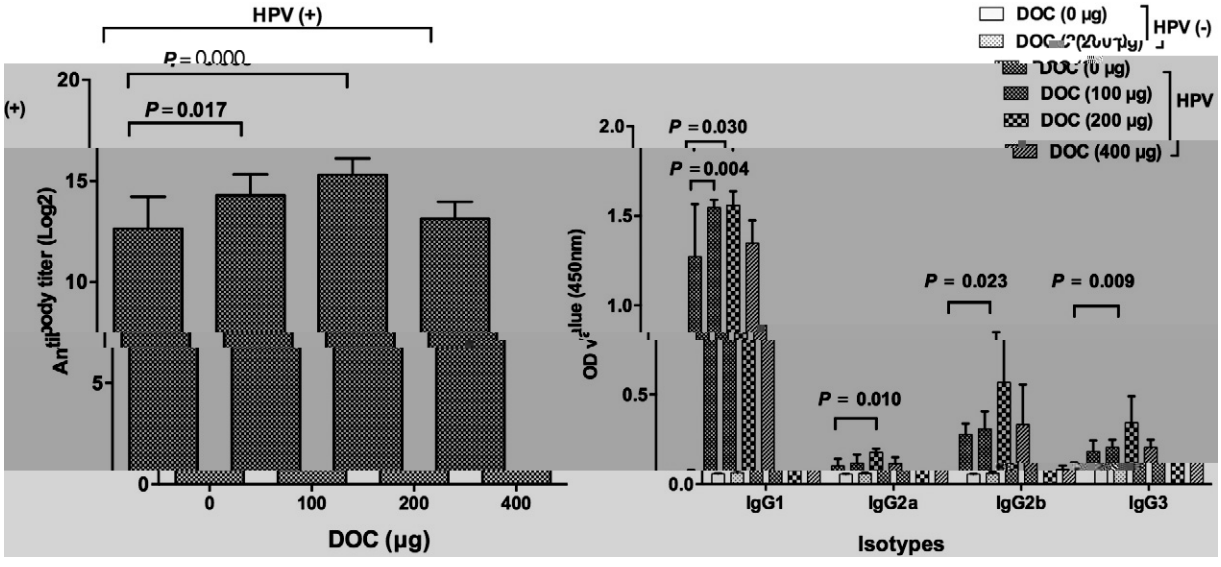

Fig. 6. o o .- (−6 / o) o - .1. o o 1 o o ( ) o ( ). o . . *P* ≤ 0.0 fi .

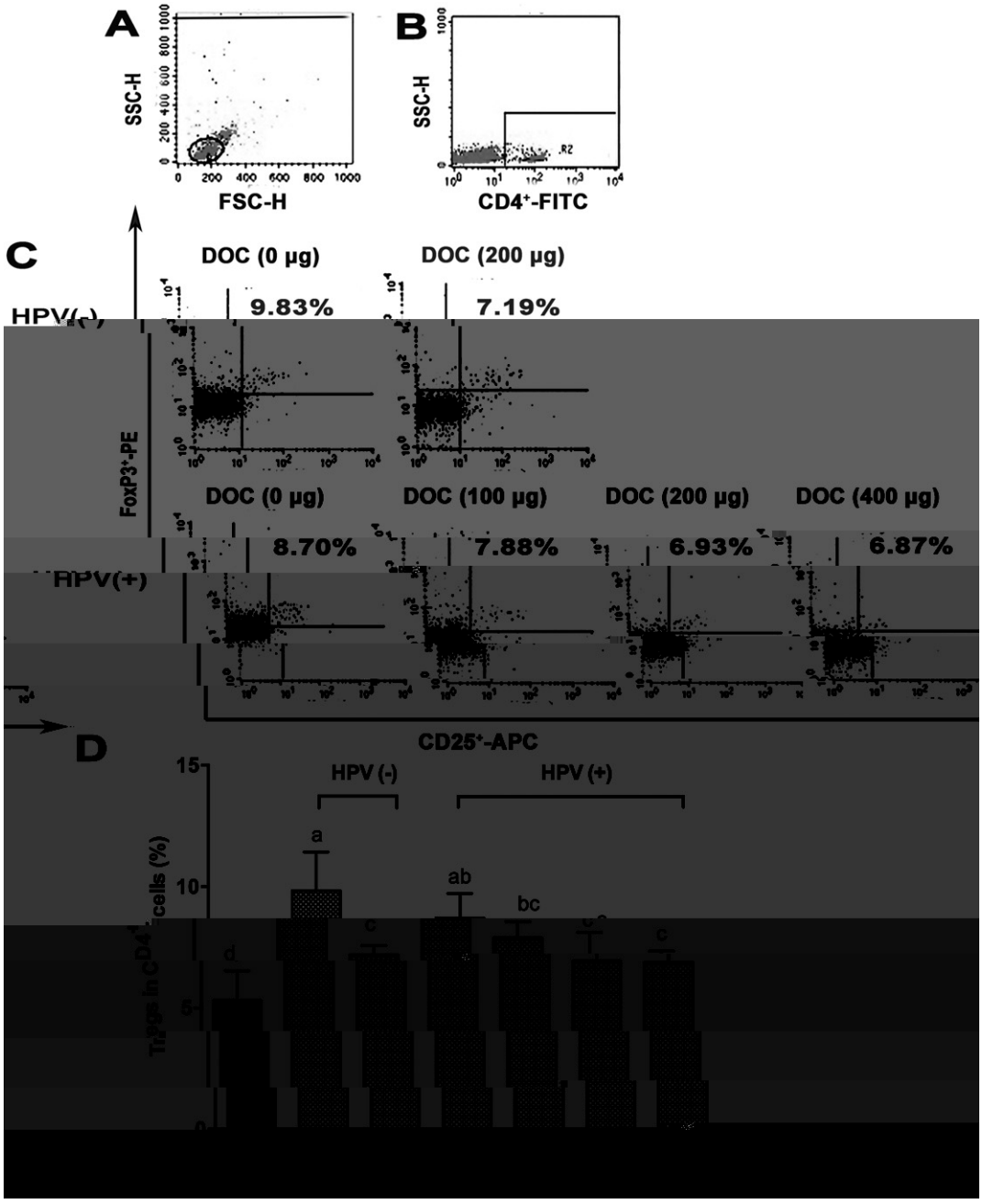

Fig. 7. o fl o . (–6 / o) o . 1. o , o o o o . o o o 1 - - , - - , -o - o (+ +_o +). , o o d fi o o o o o (-)/ (-), o . , + o – . , ( )- -o ( )- o +| o o fi o o . o o o o . , + o (%) o o . . . *P* *t*- o o - - o .

o o 6 , 6 – o o fi o o o . . o o 6 - - o- o o - -1 - - 6 , - - fi o - o o fi o o (. %) o o o o o o o o 6 . % . %, – . o , o- o o o -) (- .). o- o o fi . o o o o - fi o - o o -1 (- .). o , 6 / - fi - -γ oo o - o - o ,6 . o o o o o o - . oo o o - (o o o o - - o - 6 – o 6 1) o o o o . - . o 00 μ o – . o , fi o o o o o 00 μ o ,

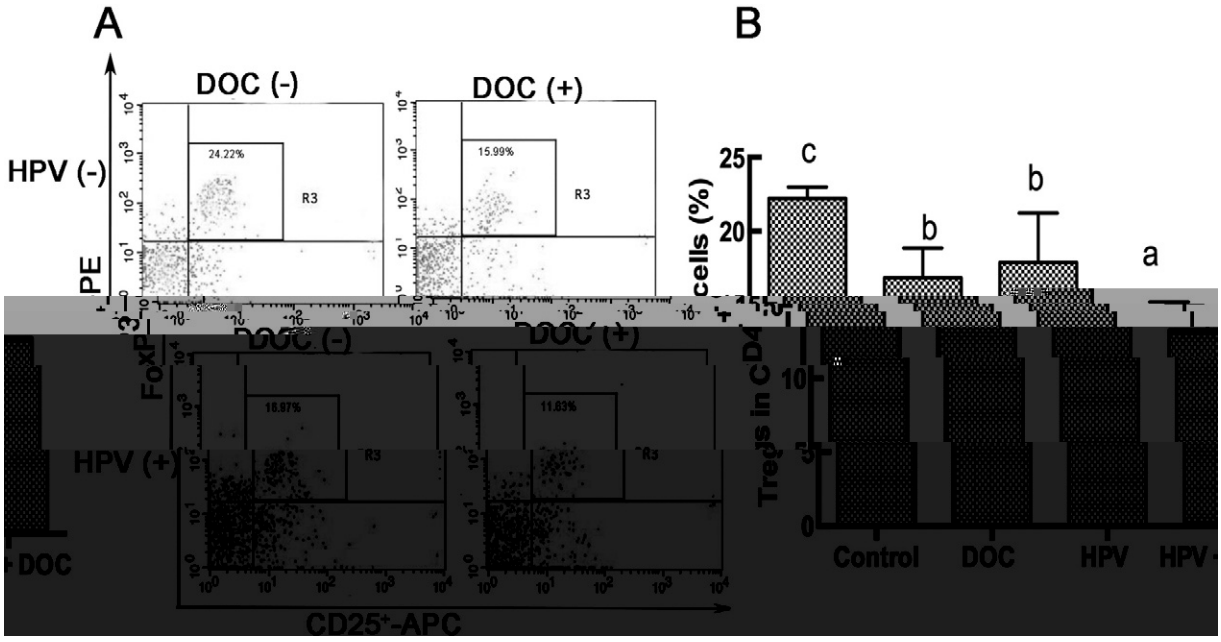
A
B
DOC (-)
DOC (+)
HPV (-)
HPV (+)
24.22%
15.99%
16.97%
11.63%
R3
PE
FoxP3
CD25+-APC
cells (%)
Tregs in CD4
Control
DOC
HPV
HPV +
a
b
c

Fig. 8.

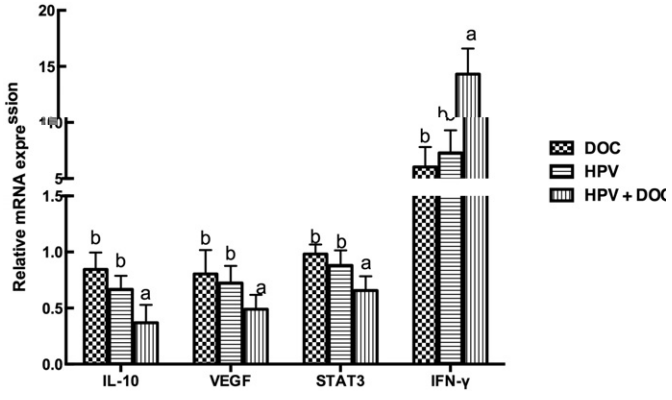
Relative mRNA expression
IL-10
VEGF
STAT3
IFN-γ
DOC
HPV
HPV + DOC

Fig. 9.

Authors' contributions

Conflict of interest

Acknowledgements

References