Pattern-recognition receptor agonist-containing immunopotentiator CVC1302 boosts long-lasting humoral immunity

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Supplemental Table 1

Name	Forward	Reverse
Mcl-1	GCTCCGGAAACTGGACATTA	CCCAGTTTGTTACGCCATCT
Bcl-2	GAAACCCCTAGTGCCATCAA	GGGACGTCAGGTCACTGAAT
BCMA	ATCTTCTTGGGGCTGACCTT	CTTTGAGGCTGGTCCTTCAG
BAFF	CCCCAGACACTTCAGAAGGA	AGGTAGGAGCTGAGGCATGA
Bax	TGAAGACAGGGGCCTTTTTG	AATTCGCCGGAGACACTCG
Atg5	TGTGCTTCGAGATGTGTGGTT	GTCAAATAGCTGACTCTTGGCAA
IRF4	TCCGACAGTGGTTGATCGAC	CCTCACGATTGTAGTCCTGCTT
β-actin	CACTGCCGCATCCTCTTCCTCCC	CAATAGTGATGACCTGGCCGT

Supplemental Table 2

Statistical analysis of the titers of both-affinity (anti-NP_{15}) NP-specific antibody among the groups immunized with Marcol 52, NP or NP-CVC1302. *P<0.05, ** P<0.01, *** P<0.001.

Groups / dpi	Marcol 52 vs NP	Marcol 52 vs NP-CVC1302	NP vs NP-CVC1302
7	*	**	*
14	***	***	**
42	***	***	***
90	ns	***	***
120	ns	***	***
150	ns	***	***

Statistical analysis of the titers of both-affinity (anti-NP_1) NP-specific antibody among the groups immunized with Marcol 52, NP or NP-CVC1302. *P<0.05, ** P<0.01, *** P<0.001.

Groups / dpi	Marcol 52 vs KV	Marcol 52 vs KV-CVC1302	KV vs KV-CVC1302
7	ns	**	ns
14	***	***	***
42	*	***	***
90	*	***	***
120	ns	***	***
150	ns	***	***

Supplemental Table 3

Statistical analysis of the percentages of plasma-blasts in draining lymph nodes among the groups immunized with Marcol 52, KV or KV-CVC1302. *P<0.05, ** P<0.01, *** P<0.001.

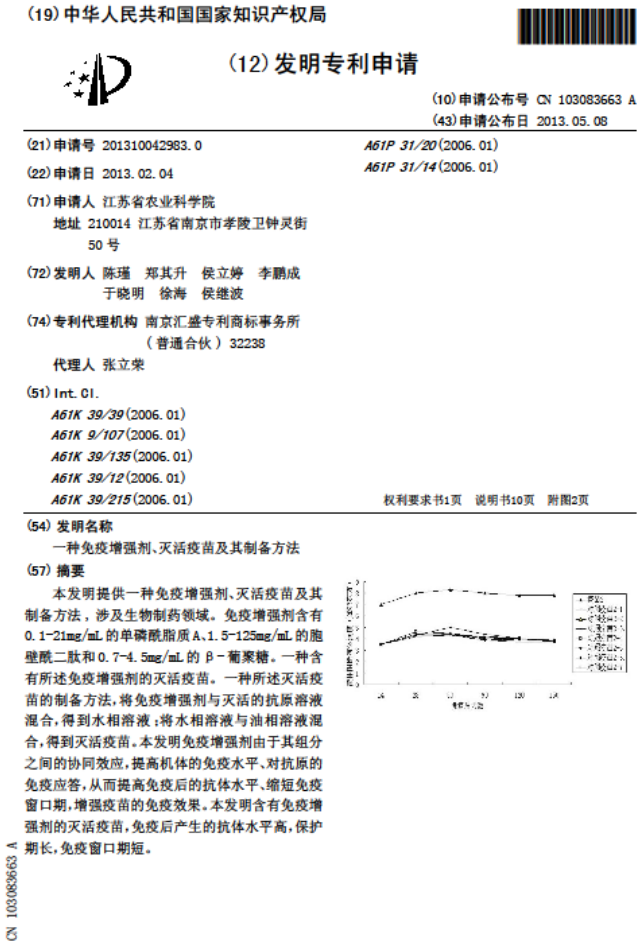
Groups / dpi	Marcol 52 vs NP	Marcol 52 vs NP-CVC1302	NP vs NP-CVC1302
7	ns	***	***
14	***	***	**
42	***	***	***
90	ns	***	***
120	*	***	***
150	***	***	***

Statistical analysis of the percentages of LLPCs in bone marrow among the groups immunized with Marcol 52, KV or KV-CVC1302. *P<0.05, ** P<0.01, *** P<0.001.

Groups / dpi	Marcol 52 vs KV	Marcol 52 vs KV-CVC1302	KV vs KV-CVC1302
7	ns	***	ns
14	***	***	***
42	***	***	***
90	**	***	***
120	***	***	***
150	*	***	***

Supplemental Fig. 1

The Chinese patent 201310042983.0, which describe the protocol to develop the combination adjuvants including the concentration of each component and the procedure when mixed with vaccine or antigen.



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(54)发明名称

一种免疫增强剂、灭活疫苗及其制备方法

(57)摘要

本发明提供一种免疫增强剂、灭活疫苗及其制备方法，涉及生物制药领域。免疫增强剂含有0.1-21mg/mL的单磷酰脂质A、1.5-125mg/mL的胞壁酰二肽和0.7-4.5mg/mL的β-葡聚糖。一种含有所述免疫增强剂的灭活疫苗。一种所述灭活疫苗的制备方法，将免疫增强剂与灭活的抗原溶液混合，得到水相溶液；将水相溶液与油相溶液混合，得到灭活疫苗。本发明免疫增强剂由于其组分之间的协同效应，提高机体的免疫水平、对抗原的免疫应答，从而提高免疫后的抗体水平、缩短免疫窗口期，增强疫苗的免疫效果。本发明含有免疫增强剂的灭活疫苗，免疫后产生的抗体水平高，保护期长，免疫窗口期短。

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Supplement Fig. 2.

The flow cytometry gating strategies of all flow cytometry analysis. Fig. 2A The gating strategy for NP^+ cDCs and NP^+ Mo, Fig. 2B The gating strategy for NP^+ Mph. Fig. 2C The gating strategy for T_{FH} cells. Fig. 2D The gating strategy for NP^+ GC B

cells. Fig. 2E The gating strategy for NP^+ plasma-blasts. Fig. 2F The gating strategy for NP^+ LLPCs.

Fig.2A

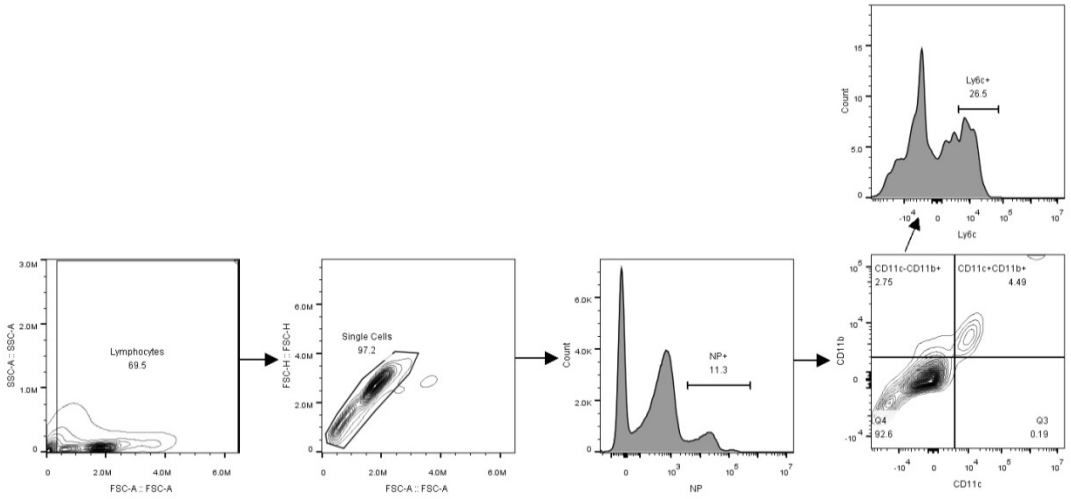


Fig. 2B

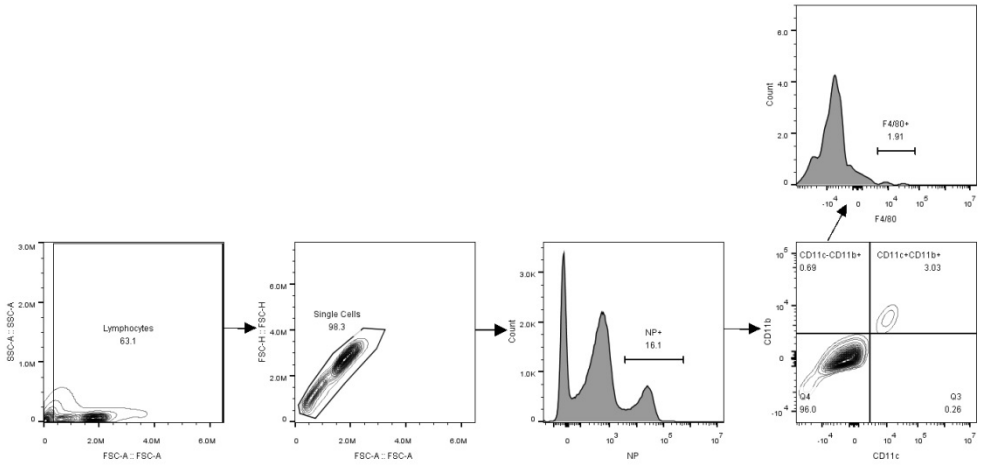


Fig. 2C

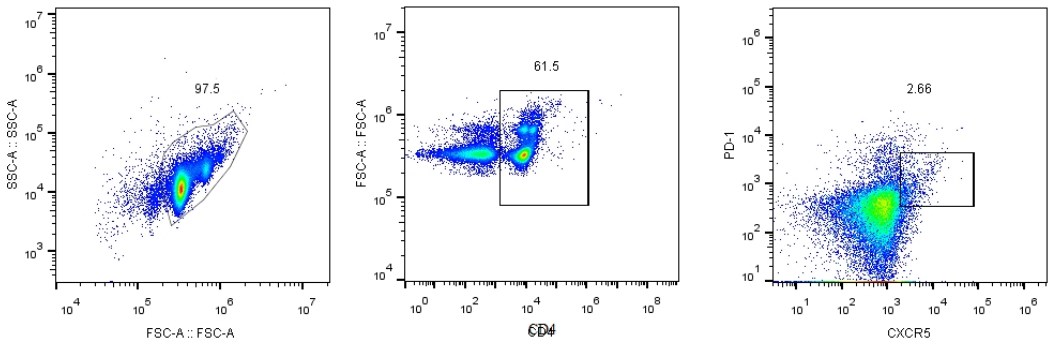


Fig. 2D

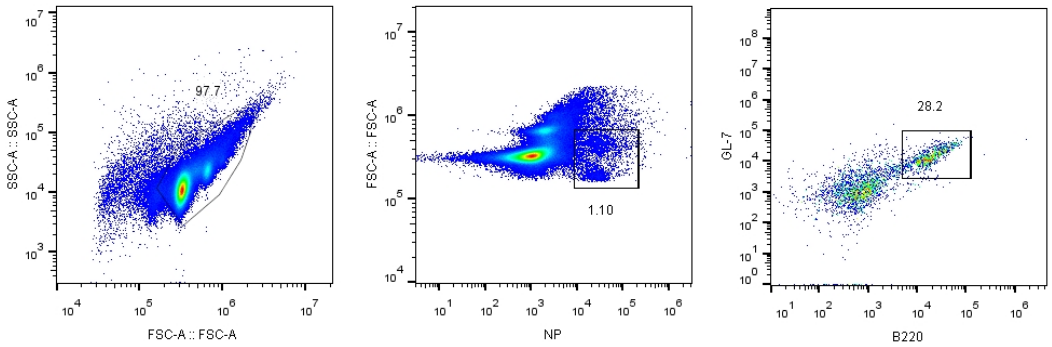


Fig. 2E

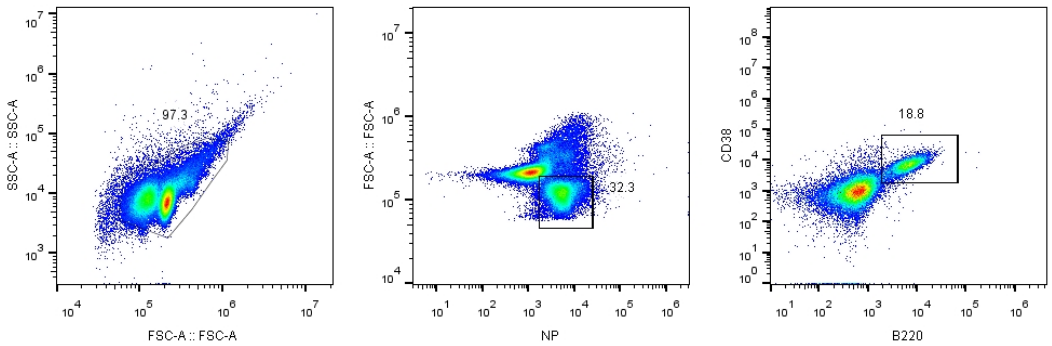
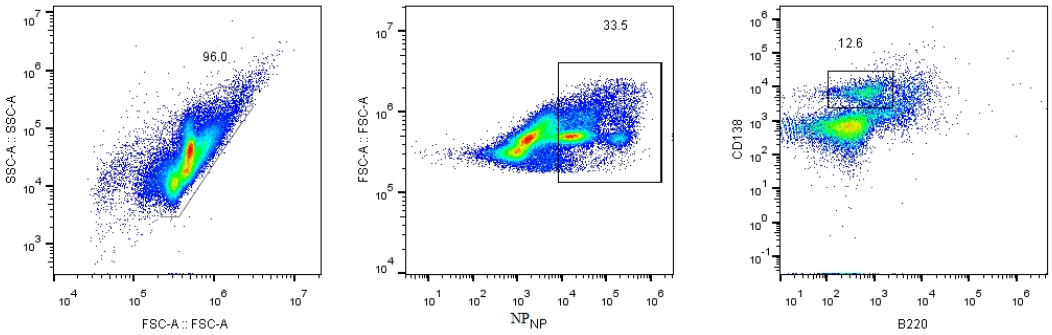


Fig. 2F


96.0
SSC-A :: SSC-A
FSC-A :: FSC-A
33.5
FSC-A :: FSC-A
NP
12.6
CD138
B220