

# CORONAVIRUS: DIAGNÓSTICO Y TERAPIA EN HUMANOS

26 Resultados

Datos actualizados a 05/05/2020 [19:03:908]

Solicitudes publicadas en los últimos 365 días/Published applications in the last 365 days

## NOVEL QUINOLINONE DERIVATIVE, PREPARATION METHOD THEREFOR, AND ANTIVIRAL COMPOSITION CONTAINING SAME AS ACTIVE INGREDIENT

Nº publicación [WO2020080682A1](#) 23/04/2020

Solicitantes KOREA RES INST CHEMICAL TECH [KR]  
PASTEUR INSTITUT KOREA [KR]  
KOREA INST ORIENTAL MEDICINE [KR]

Resumen The present invention relates to a novel quinolinone derivative, a preparation method therefor, and an antiviral composition containing same as an active ingredient. A novel quinolinone derivative provided in one aspect of the present invention exhibits an excellent inhibitory activity against a coronavirus infection, and thus can be effectively used as a pharmaceutical composition for preventing or treating a disease caused by a coronavirus infection, that is, MERS.

## ISOXAZOLE DERIVATIVES AND PREPARATION PROCESS THEREOF

Nº publicación [WO2020040343A1](#) 27/02/2020

Solicitantes IL YANG PHARM CO LTD [KR]

Resumen The present invention relates to an isoxazole derivative compound of Formula (1) useful as a substance for treating respiratory viral infectious disease caused by coronavirus, in particular, Middle East respiratory syndrome-coronavirus (MERS-CoV); a pharmaceutically acceptable derivative thereof; a preparation process of the same; and a pharmaceutical composition for the treatment of coronavirus infection comprising the above compound as an active ingredient.

공개특허 10-2020-0023034

표 2

CC<sub>50</sub> 값

No.	실시예	M.W.	CC <sub>50</sub>
1	실시예 10	467.91	50.71
2	실시예 11	467.91	46.87
3	실시예 16	417.90	-
4	실시예 17	417.90	45.56
5	실시예 18	456.77	-

[0285]

표 3

No.	실시예	M.W.	BC <sub>50</sub>	CC <sub>50</sub>	SI (CC <sub>50</sub> /BC <sub>50</sub> )
1	실시예 10	467.91	17.50	50.71	2.89
2	실시예 11	467.91	22.26	46.87	2.10
3	실시예 16	417.90	1.15	-	-
4	실시예 17	417.90	1215	45.56	0.037
5	실시예 18	456.77	67.68	-	-

[0286]

실질적 이용가능성

[0288]

본 발명은 코로나바이러스에 대해 강력한 항바이러스 활성을 갖는 신규의 이소자솔 유도체 화합물, 이들 화합물의 제조방법 및 이들 화합물을 유효성분으로 포함하는 조성물을 제공하며, 코로나바이러스 감염, 특히 중증급성 기증후군 (코로나바이러스(MERS-CoV) 감염으로 인한 바이러스성 호흡기 질환의 예방 및 치료를 위한 항바이러스제를 개발할 수 있다.

도면

도면1

	실시예	M.W.	BC <sub>50</sub> (uM)	Concentration (uM) [MERS-CoV]						
				Cont.	100	50	25	12.5	6.25	3.13
1	실시예 10	467.91	17.50							
2	실시예 11	467.91	22.26							
3	실시예 17	417.90	1215							

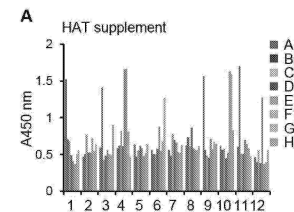
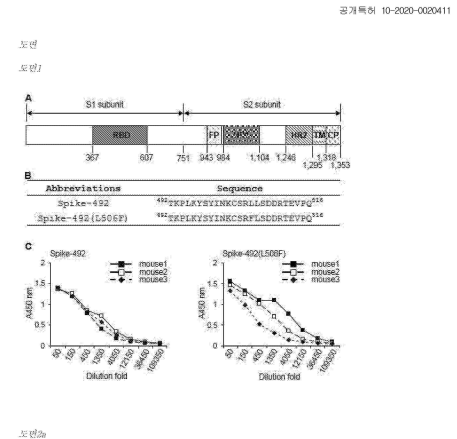
- 23 -

## MONOCLONAL ANTIBODY AGAINST S PROTEIN OF MERS-CORONAVIRUS, AND USE OF SAME

Nº publicación [WO2020036403A1](#) 20/02/2020

Solicitantes INDUSTRY ACADEMIC COOPERATION FOUNDATION HALLYM UNIV [KR]

**Resumen** The present invention relates to a monoclonal antibody capable of specifically recognizing a spike protein of Middle East respiratory syndrome coronavirus (MERS-CoV) or a portion of the protein, or a functional fragment of the monoclonal antibody; and to a use of same, wherein the monoclonal antibody or a functional fragment thereof is characterized by comprising any one polypeptide sequence selected from the group consisting of the following polypeptide sequences, and wherein the monoclonal antibody consists of a heavy chain comprising a CDR1 region represented by SEQ ID NO: 1, a CDR2 region represented by SEQ ID NO: 2, and a CDR3 region represented by SEQ ID NO: 3, and a light chain comprising a CDR1 region represented by SEQ ID NO: 4, a CDR2 region represented by SEQ ID NO: 5, and a CDR3 region represented by SEQ ID NO: 6.



- 16 -

**HBD2human beta-defensin 2 A composition for preventing or treating MERS-CoV virus comprising HBD2 human beta-defensin 2 or an fusion protein comprising epitope protein of MERS-CoV virus and the HBD2**

Nº publicación [KR20190134578A](#) 04/12/2019

Solicitantes NAT UNIV CHONBUK IND COOP FOUND [KR]

**Resumen** The present invention relates to a composition for preventing or treating MERS-coronavirus comprising human beta-defensin 2 (HBD2) or epitope protein of MERS virus fused with a gene. In other words, HBD2 has effects of antiviral activity, innate immunity enhancement, and immunity enhancement.

**New coronavirus vaccine based on chimpanzee adenovirus type 68 and MERS-CoV full length membrane protein**

Nº publicación [CN110616198A](#) 27/12/2019

Solicitantes UNIV TSINGHUA  
INST PASTEUR SHANGHAI CAS

**Resumen** The present invention discloses a new coronavirus vaccine based on chimpanzee adenovirus type 68 and MERS-CoV full length membrane protein. The recombinant adenovirus is obtained by transfecting an adenovirus packaging cell with a recombinant plasmid and then performing cell culture; the recombinant plasmid is obtained by inserting a specific DNA molecule into a delta-E1 region of a chimpanzee adenovirus vector AdC68; the specific DNA molecule has a full-length MERS-CoV Spike protein encoding gene; and the adenovirus packaging cell has an adenovirus E1 gene. The present invention also protects the recombinant adenovirus expressing the full-length MERS-CoV Spike protein; and a starting strain of the recombinant adenovirus is chimpanzee adenovirus type 68 or non-replicating chimpanzee adenovirus type 68. The developed vaccine against the new coronavirus MERS-CoV has important theoretical guidance value and broad application prospects, and provides a possibility for radical cure of Middle East respiratory syndrome.

## Human Antibodies to Middle East Respiratory Syndrome - Coronavirus Spike Protein

Nº publicación [US2019351049A1](#) 21/11/2019

Solicitantes REGENERON PHARMA [US]

**Resumen** The present invention provides monoclonal antibodies that bind to the Middle East Respiratory Syndrome—Coronavirus (MERS-CoV) spike protein, and methods of use. In various embodiments of the invention, the antibodies are fully human antibodies that bind to MERS-CoV spike protein. In some embodiments, the antibodies of the invention are useful for inhibiting or neutralizing MERS-CoV activity, thus providing a means of treating or preventing MERS infection in humans. In some embodiments, the invention provides for a combination of one or more antibodies that bind to the MERS-CoV spike protein for use in treating MERS infection. In certain embodiments, the one or more antibodies bind to distinct non-competing epitopes comprised in the receptor binding domain of the MERS-CoV spike protein.

Patent Application Publication Nov. 30, 2017 Sheet 1 of 14 US 2017/0340728 A1

Sample ID	ELISA Binding	ELISA Binding	% Neutralization (IC50 µg/ml)	Neutralization IC50 (nM)	RD (nM)	IT <sub>50</sub> (nM)
HR2000001	2.476	99.7	99%	1.288E-10	1.72E-09	11.1
HR2000002	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000003	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000004	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000005	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000006	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000007	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
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HR2000012	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000013	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
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HR2000015	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000016	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000017	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
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HR2000027	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000028	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000029	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
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HR2000031	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000032	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
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HR2000061	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000062	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000063	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000064	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
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HR2000066	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000067	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000068	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000069	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000070	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000071	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000072	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000073	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000074	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000075	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000076	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000077	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000078	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000079	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000080	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000081	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000082	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000083	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
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HR2000094	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000095	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
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HR2000097	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000098	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000099	2.412	99.7	99%	1.482E-10	2.0E-10	10.1
HR2000100	2.412	99.7	99%	1.482E-10	2.0E-10	10.1

Figure 1

## MERS CORONAVIRUS VACCINE

Nº publicación [US2019351048A1](#) 21/11/2019

Solicitantes CUREVAC AG [DE]

**Resumen** The present invention relates to mRNAs suitable for use as mRNA-based vaccines against infections with MERS coronaviruses. Additionally, the present invention relates to a composition comprising the mRNAs and the use of the mRNAs or the composition for the preparation of a pharmaceutical composition, especially a vaccine, e.g. for use in the prophylaxis or treatment of MERS coronavirus infections. The present invention further describes a method of treatment or prophylaxis of infections with MERS coronavirus using the mRNA sequences.

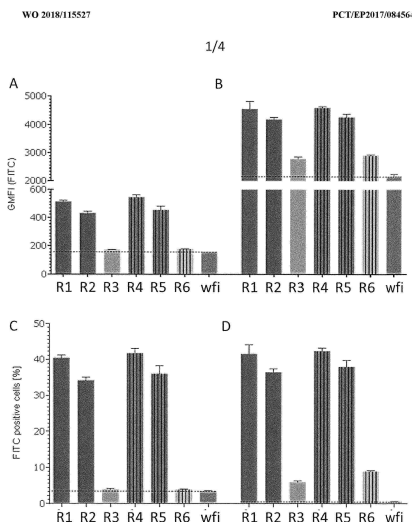


FIG. 1

**An anti-MERS-CoV monoclonal antibody and use of the same**Nº publicación [KR20190122283A](#) 30/10/2019

Solicitantes INDUSTRY ACADEMIC COOPERATION FOUNDATION HALLYM UNIV [KR]

Resumen The present invention relates to a monoclonal antibody that specifically recognizes a protein of MERS-coronavirus (MERS-CoV) or a portion of the protein, or a functional fragment thereof, and uses thereof, wherein the monoclonal antibody or functional fragment thereof comprises any one polypeptide sequence selected from the group consisting of the following polypeptide sequences: a heavy chain comprising a CDR1 region as depicted in SEQ ID NO: 1, a CDR2 region as depicted in SEQ ID NO: 2 and a CDR3 region as depicted in SEQ ID NO: 3; and a light chain comprising a CDR1 region as depicted in SEQ ID NO: 4, a CDR2 region as depicted in SEQ ID NO: 5 and a CDR3 region as depicted in SEQ ID NO: 6.

**WHOLE PROTEIN GENE OF MERS-CoV NUCLEOPROTEIN AND VACCINE COMPOSITION FOR PREVENTING INFECTION OF MERS-CoV COMPRISING THE SAME**Nº publicación [KR20190119391A](#) 22/10/2019

Solicitantes KOREA RES INST BIOSCIENCE &amp; BIOTECHNOLOGY [KR]

Resumen The present invention relates to a full-length protein gene of Middle East respiratory syndrome coronavirus (MERS-CoV) nucleoprotein and a vaccine composition for preventing MERS-CoV infection comprising the same. The full-length protein gene antigen of MERS-CoV nucleoprotein represented by SEQ ID NO: 1 according to the present invention can be mass-produced in *E. coli*. In addition, the antigen-inoculated animal model shows the ability to protect against MERS-CoV, and thus can be widely used for MERS-CoV prevention.

**IMMUNOGENIC COMPOSITION FOR MERS CORONAVIRUS INFECTION**Nº publicación [US2019328865A1](#) 31/10/2019

Solicitantes NEW YORK BLOOD CENTER INC [US]

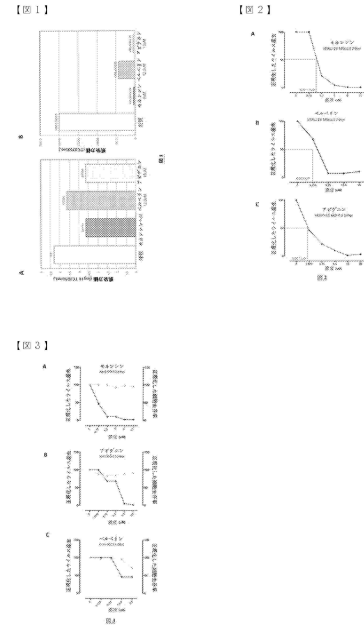
Resumen Described herein are immunogenic compositions for preventing infection with Middle East respiratory syndrome coronavirus (MERS-CoV) wherein the immunogenic compositions comprise at least a portion of the MERS-CoV S protein and an immunopotentiator.

## ANTIVIRAL COMPOSITIONS FOR THE TREATMENT OF INFECTIONS LINKED TO CORONAVIRUSES

Nº publicación [US2019307722A1](#) 10/10/2019

Solicitantes UNIV CLAUDE BERNARD LYON [FR]  
INSTITUTE NATIONAL DE LA SANTE ET DE LA RECH MEDICALE INSERM [FR]  
CENTRE NAT RECH SCIENT [FR]

Resumen The present invention relates to a pharmaceutical or veterinary composition for its use in preventing and/or treating a MERS-CoV (Middle-East Respiratory Syndrome) coronavirus infection, characterised in that it comprises, in a suitable pharmaceutical vehicle, at least one compound chosen from apigenin and berberine.



## A METHOD FOR DETECTING MERS CORONAVIRUS USING MERS CORONAVIRUS NUCLEOCAPSID FUSION PROTEIN

Nº publicación [KR102019008B1](#) 05/09/2019

Solicitantes KOREA CENTER FOR DISEASE CONTROL AND PREVENTION [KR]  
KOREA RES INST BIOSCIENCE & BIOTECHNOLOGY [KR]

Resumen The present invention relates to a nucleocapsid fusion protein comprising N-terminal and C-terminal domain fragments of the MERS coronavirus nucleocapsid protein, a method for detecting MERS coronavirus using a monoclonal antibody derived from the fusion protein and a detection kit to be used therefor. According to the present invention, the presence of MERS coronavirus-related antibody in the target sample can be effectively confirmed, and the MERS coronavirus infection can be quickly diagnosed.

## Application of MERS-CoV 3CLpro (Middle East respiratory syndrome coronavirus 3C-like protease) as deubiquitinating enzyme and interferon inhibitor

Nº publicación [CN110257357A](#) 20/09/2019

Solicitantes INST OF MILITARY MEDICINE ACADEMY OF MILITARY SCIENCES OF PLA

Resumen The invention relates to the field of biomedicine, in particular to application of MERS-CoV 3CLpro (Middle East respiratory syndrome coronavirus 3C-like protease) as a deubiquitinating enzyme and interferon inhibitor. The invention provides a novel deubiquitinating enzyme and interferon inhibitor; the new understanding of the functionality of human coronavirus proteinase can be expanded; theoretical basis can be provided for the research on coronavirus and host antiviral natural immunization and the research on antiviral drugs using viral proteinase as a target.

## TREATMENT OF MIDDLE EAST RESPIRATORY SYNDROME CORONAVIRUS

Nº publicación [US2019262432A1](#) 29/08/2019

Solicitantes ANSUN BIOPHARMA INC [US]

Resumen The present disclosure provides novel compositions and methods for treating an infection by MERS-CoV. In particular, the present disclosure provides methods that entail administering agents having an anchoring domain that anchors the compound to the surface of a target cell, and a sialidase domain that can act extracellularly to inhibit infection of a target cell by MERS-CoV.

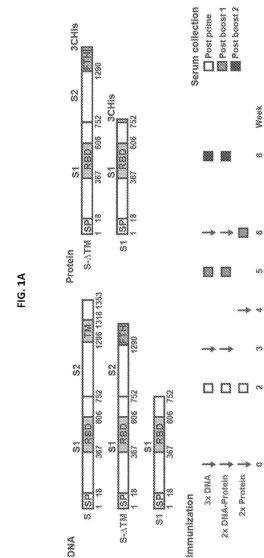
## MIDDLE EAST RESPIRATORY SYNDROME CORONAVIRUS IMMUNOGENS, ANTIBODIES, AND THEIR USE

Nº publicación [US2019256579A1](#) 22/08/2019

Solicitantes US HEALTH [US]

Resumen Methods of inducing an immune response in a subject to the Middle East respiratory syndrome coronavirus (MERS-CoV) are provided. In several embodiments, the immune response is a protective immune response that inhibits or prevents MERS-CoV infection in the subject. Recombinant MERS-CoV polypeptides and nucleic acid molecules encoding same are also provided. Additionally, neutralizing antibodies that specifically bind to MERS-CoV S protein and antigen binding fragments thereof are disclosed. The antibodies and antigen binding fragments are useful, for example, in methods of detecting MERS-CoV S protein in a sample or in a subject, as well as methods of preventing and treating a MERS-CoV infection in a subject.

Patent Application Publication Aug. 30, 2018 Sheet 1 of 36 US 2018/0244756 A1



## nsP13 Compounds that inhibit MERS coronavirus helicase nsP13 and uses thereof

Nº publicación [KR20190092776A](#) 08/08/2019

Solicitantes UNIV KOOKMIN IND ACAD COOP FOUND [KR]

Resumen The present invention relates to a MERS coronavirus helicase nsP13 activity inhibitor comprising a naturally derived compound. An inhibitor of the present invention can be used to effectively and safely prevent and treat viral diseases by efficiently inhibiting dsRNA unwinding activity and/or ATP hydrolytic activity of MERS coronavirus helicase nsP13.

## A binding molecules able to neutralize middle east respiratory-syndrome coronavirus

Nº publicación [KR20190093114A](#) 08/08/2019

Solicitantes CELLTRION INC [KR]

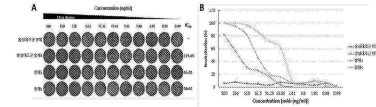
**Resumen** The present invention relates to a binding molecule having neutralizing activities against Middle East respiratory syndrome-coronavirus (MERS-CoV). More particularly, the present invention relates to a binding molecule which has a superior ability to bind to the S protein of MERS-CoV and a neutralizing effect on MERS-CoV and is very useful in preventing, treating, or diagnosing MERS-CoV infection.

공개특허 10-2019-0093110

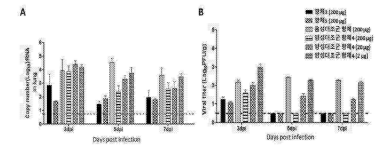
측정하였고, 또한 마우스의 폐조직을 적출하여 상기 바이러스의 양을 측정하였다(도 5). 마우스 폐장 검출(도 5A) 및 마우스 정돈본(도 5B)을 평가해 본 결과, 음성 대조군 형제 및 형제 5의 가장 낮은 부위량(2 ug)에서만 계층 감소 및 치사율이 관찰되었다. 또한, quantitative PCR(도 5C) 및 plaque assay(도 5D)를 통한 바이러스 코로 나바이러스의 정량 결과, 형제 5가 양성 대조군 형제 4와 비교하여 우수하거나 유사한 치료 효능을 갖는 것을 확인하였다.

도면

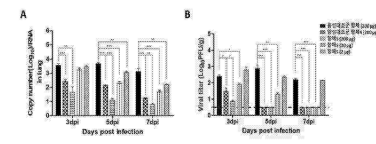
도면1



도면2



도면3



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## A binding molecules able to neutralize middle east respiratory-syndrome coronavirus

Nº publicación [KR20190093110A](#) 08/08/2019

Solicitantes CELLTRION INC [KR]

**Resumen** The present invention relates to a binding molecule having neutralizing activities against Middle East respiratory syndrome-coronavirus (MERS-CoV). More particularly, the present invention relates to a binding molecule which has a superior ability to bind to the S protein of MERS-CoV and a neutralizing effect on MERS-CoV and is very useful in preventing, treating, or diagnosing MERS-CoV infection.

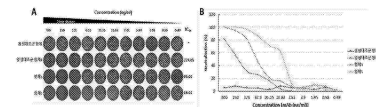
공개특허 10-2019-0093114

[0197] 또한, 감염 7일째의 마우스 폐를 적출 후 1000 배로 희석하여 조지 내에서의 번식을 직접 관찰하고자 하였다. 그 결과, 음성 대조군 형제 처리군에서는 기도 폐색이 뚜렷하게 있고, 혈관세포들이 많이 침윤되어 있어 극심한 조직병리학적 변화가 나타난 것을 확인하였다(도 5A 및 D). 양성 대조군 형제 처리군에서는 음성 대조군 형제 처리군 대비 침하지는 않으나, 혈관세포의 침윤 및 뚜렷한 기도 폐색을 확인하였다(도 5B 및 E). 반면, 형제 5를 처리한 군에서는 타 처리군 대비 조직 병리학적 변화가 더 적게 나타나는 것을 확인하였다(도 5C 및 F).

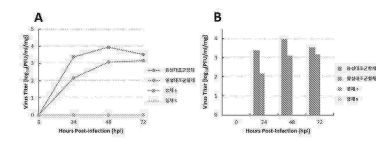
[0199] 아울러, 치료 효능 평가를 위하여 상기 바이러스를 동물에 감염시키고 격일 형제 5, 양성 대조군 형제 4 및 음성 대조군 형제를 각각 최강제 주사하였다. 최종 감염일자의 결과 후 마우스 폐장 감소 정도, 마우스 정돈본을 측정하였고, 또한 마우스의 폐조직을 적출하여 상기 바이러스의 양을 측정하였다(도 6). 마우스 폐장 검출(도 6A) 및 마우스 정돈본(도 6B)을 평가해 본 결과, 음성 대조군 형제 및 형제 5의 가장 낮은 부위량(2 ug)에서만 계층 감소 및 치사율이 관찰되었다. 또한, quantitative PCR(도 6C) 및 plaque assay(도 6D)를 통한 바이러스 코로 나바이러스의 정량 결과, 형제 5가 양성 대조군 형제 4와 비교하여 우수하거나 유사한 치료 효능을 갖는 것을 확인하였다.

도면

도면1



도면2



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## A binding molecules able to neutralize middle east respiratory-syndrome coronavirus

Nº publicación [KR20190093107A](#) 08/08/2019

Solicitantes CELLTRION INC [KR]

**Resumen** The present invention relates to a binding molecule having neutralizing activities against Middle East respiratory syndrome-coronavirus (MERS-CoV). More particularly, the present invention relates to a binding molecule which has a superior ability to bind to the S protein of MERS-CoV and a neutralizing effect on MERS-CoV and is very useful in preventing, treating, or diagnosing MERS-CoV infection.

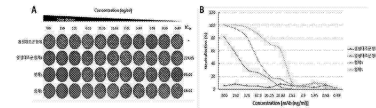
공개특허 10-2019-0093114

[0097] 또한, 감염 7일째의 카우스 폐를 적출 후 100% 열처리하여 조직 내에서의 변화를 직접 관찰하고자 하였다. 그 결과, 음성 대조군 형제 처리군에서는 기도 벽이 두꺼워져 있고, 염색세포들이 많이 침윤되어 있어 극심한 조직병리학적 변화가 나타난 것을 확인하였다(도 3A 및 D). 양성 대조군 형제 처리군에서는 음성 대조군 형제 처리군 대비 침윤하는 염색세포, 염색세포의 침윤 및 두꺼워진 기도 벽의 감소가 확인되었다(도 3B 및 E). 반면, 형제 3을 처리한 군에서는 타 처리군 대비 조직 병리학적 변화가 더 적게 나타나는 것을 확인하였다(도 3C 및 F).

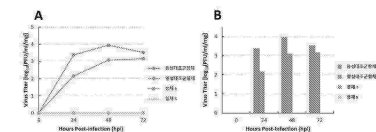
[0099] 아울러, 치료 효과 평가를 위하여 상기 바이러스를 동물체 감염시키고 2일 후에 3. 양성 대조군 형제 4 및 음성 대조군 형제 5를 각각 복강내 주사하였다. 특정 감염일차의 결과 후 카우스 폐를 같은 정도, 카우스 폐를 동결하여 분석하였고, 또한 카우스의 폐조직을 적출하여 상기 바이러스의 양을 측정하였다(도 4). 카우스 폐중 간세포(5.6A) 및 카우스 폐중 간세포(5.6B)를 평가해 본 결과, 음성 대조군 형제 및 형제 5가 가장 낮은 바이러스 양(5.6A)을 감소 및 치사율이 관찰되었다. 또한, quantitative PCR(5.6C) 및 plaque assay(5.6D)를 통한 바이러스 코딩 나바리시스의 정량 결과, 형제 5가 양성 대조군 형제 4와 비교하여 유사하거나 유사한 치료 효과를 갖는 것을 확인하였다.

도면

도면1



도면2



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## Quadruple fluorescence quantitative detection kit for simultaneously detecting four human coronaviruses

Nº publicación [CN110144422A](#) 20/08/2019

Solicitantes WUXI CUSTOMS DISTR PEOPLES REPUBLIC OF CHINA  
INST FOR VIRAL DISEASE CONTROL AND PREVENTION CHINESE CENTER FOR DISEASE CONTROL AND PREVENTION

**Resumen** The present invention relates to a quadruple fluorescence quantitative detection kit for simultaneously detecting four human coronaviruses, and belongs to the technical field of human coronavirus detection. The human coronaviruses are specifically MERS-CoV/HCoV-NL63/HCoV-OC43/HCoV-HKU1; the detection kit specifically comprises four groups of specific primer pairs and probes, a positive quality control product and a negative quality control product; each group of the specific primer pairs and probes all comprises a pair of specific primers and a probe sequence; the positive quality control product is specifically an artificially synthetic target sequence; and the negative quality control product is deionized water or sterile water. The kit can simultaneously detect the four human coronaviruses by a single tube, is strong in detection specificity, high in detection sensitivity and fast in detection time, and avoids problems that one-by-one detection is long in time-consuming, high in detection cost, easy for cross-contamination, etc. No similar related product is reported on the market at present. The kit has broad application prospects in disease detection, prevention and control of infectious diseases, clinical treatment guidance, etc.

## BINDING MOLECULE HAVING NEUTRALIZING ACTIVITY AGAINST MIDDLE EAST RESPIRATORY SYNDROME-CORONAVIRUS

Nº publicación [WO2019151632A1](#) 08/08/2019

Solicitantes CELLTRION INC [KR]

**Resumen** The present invention relates to a binding molecule having neutralizing activity against Middle East respiratory syndrome-coronavirus (MERS-CoV). More particularly, the present invention relates to a binding molecule having a superior ability to bind to the S protein of MERS-CoV and also having a neutralizing effect on MERS-CoV and is very useful in preventing, treating, or diagnosing MERS-CoV infection.



## PRETREATMENT METHOD OF SPUTUM FOR DETECTING MIDDLE EAST RESPIRATORY SYNDROME CORONAVIRUS

Nº publicación [KR20190078174A](#) 04/07/2019

Solicitantes KOREA CENTER FOR DISEASE CONTROL AND PREVENTION [KR]  
 BIONOTE INC [KR]  
 KOREA UNIV RESEARCH AND BUSINESS FOUNDATION SEJONG CAMPUS [KR]

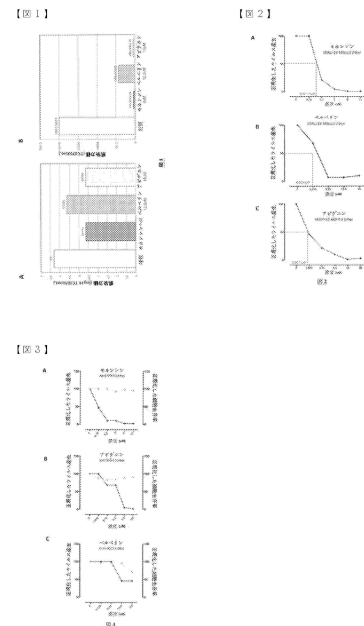
Resumen The present invention relates to a method for pretreatment of sputum for detecting Middle East respiratory syndrome coronavirus (MERS-CoV). Specifically, when a reducing agent and a neutralizing agent are sequentially pretreated in sputum, MERS-CoV in the sputum can be detected quickly and accurately by eliminating mucus without damaging the antigen of the virus included in the sputum, which thus can be usefully used to detect MERS-CoV.

## ANTIVIRAL COMPOSITIONS FOR THE TREATMENT OF INFECTIONS LINKED TO CORONAVIRUSES

Nº publicación [CN110035767A](#) 19/07/2019

Solicitantes UNIV CLAUDE BERNARD LYON  
 INST NAT SANTE RECH MED  
 CENTRE NAT RECH SCIENT

Resumen The invention relates to a pharmaceutical or veterinary composition for the use thereof in the prevention and/or treatment of an infection by the MERS-CoV (Middle-East Respiratory Syndrome Corona virus), characterised in that it comprises, in a suitable pharmaceutical vehicle, at least one compound selected from apigenin and berberine.



HBD2human beta-defensin 2 A composition for preventing or treating MERS-CoV virus comprising HBD2 human beta-defensin 2 or an fusion protein comprising epitope protein of MERS-CoV virus and the HBD2L

Nº publicación [KR20190070629A](#) 21/06/2019

Solicitantes NAT UNIV CHONBUK IND COOP FOUND [KR]

Resumen The present invention relates to a composition for preventing or treating MERS-coronavirus comprising human beta-defensin 2 (HBD2) or epitope protein of MERS virus fused with a gene. In other words, HBD2 has effects of antiviral activity, innate immunity enhancement, and immunity enhancement.

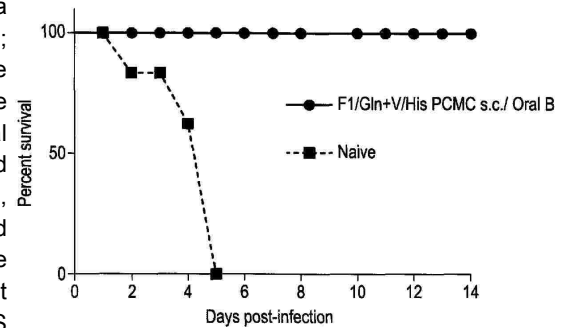
## Pharmaceutical compositions and associated kits and uses

Nº publicación [GB2573649A](#) 13/11/2019

Solicitantes SECR DEFENCE [GB]  
 PROXIMA CONCEPTS LTD [GB]  
 THE UNIV OF STRATHCLYDE [GB]

**Resumen** A vaccine comprises a first primer formulation comprising a bioactive component, microcrystal excipient and solubility modifier; and a second booster formulation comprising a bioactive component, amphiphile and an oil-based excipient; wherein the first formulation and second formulation are sequentially administered to the animal via a parenteral route and an oral route respectively. Preferably, the microcrystal comprises an amino acid (preferably glutamine or histidine) and preferably the solubility modifier comprises calcium phosphate, whilst the amphiphile is phosphatidylcholine or pegylated straight-chain hydrocarbons. Vaccine kits to prevent plague (comprising *Yersinia pestis* F1 and V proteins) and to prevent Middle East Respiratory syndrome (comprising MERS coronavirus receptor binding domain protein, RBD) are disclosed.

Fig. 5



## IMMUNOGENIC COMPOSITION FOR MERS CORONAVIRUS INFECTION

Nº publicación [EP3541419A1](#) 25/09/2019

Solicitantes NEW YORK BLOOD CENTER INC [US]

**Resumen** Described herein are immunogenic compositions for preventing infection with Middle East respiratory syndrome coronavirus (MERS-CoV) wherein the immunogenic compositions comprise at least a portion of the MERS-CoV S protein and an immunopotentiator.

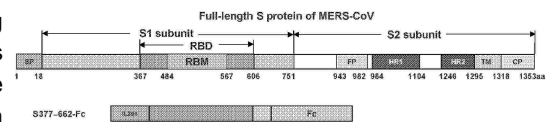


FIG. 1