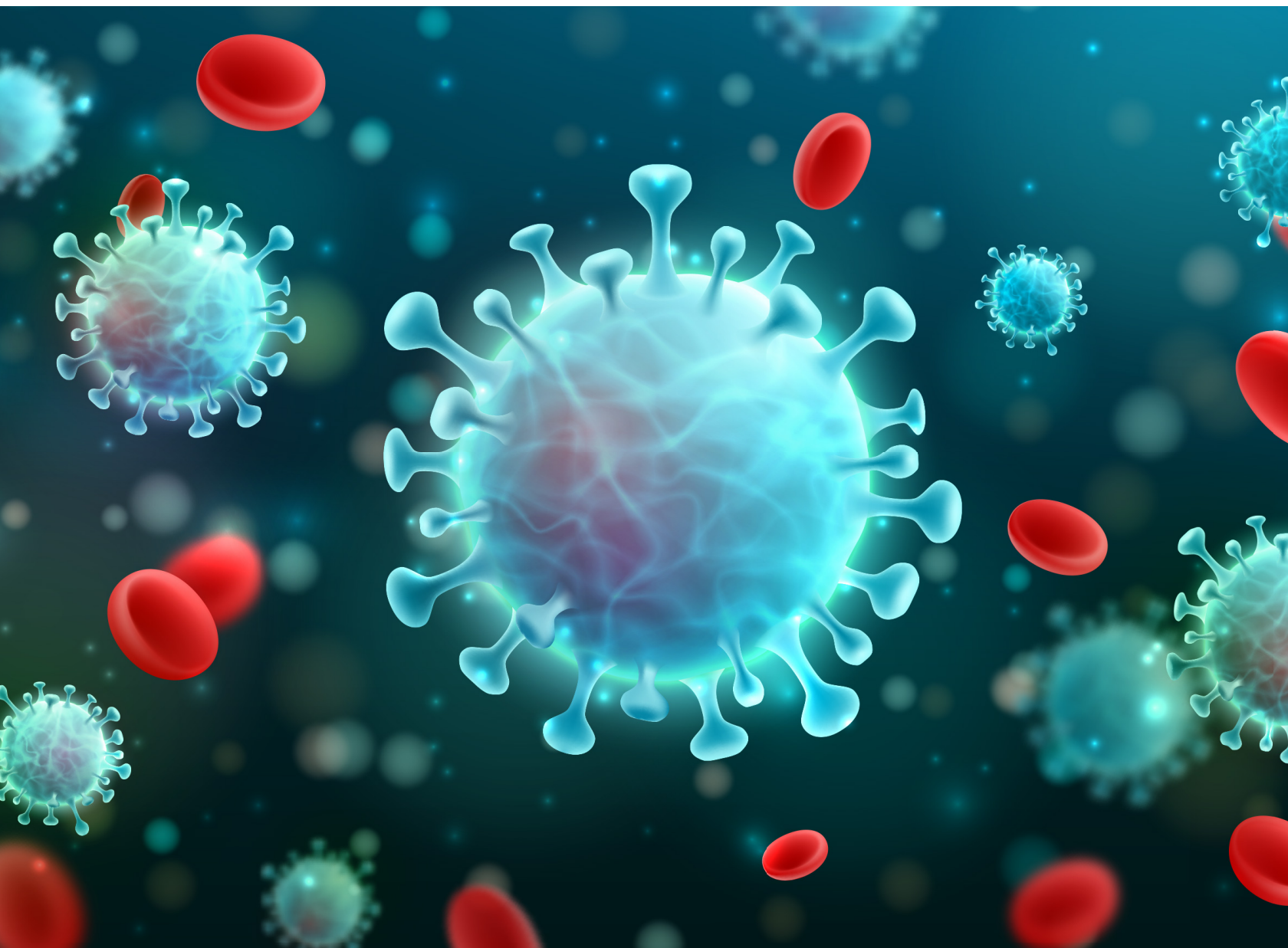


CORONAVIRUS & VIRAL INFECTION

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WELCOME

Though possessing a skeletal genome and being magnitudes of order smaller than a cell, viruses are a large threat to humanity. After entering host cells, they hijack their machinery to produce more viral particles and, in many cases, lyse cells in the process, wreaking havoc on organ systems. To combat these pathogens, the immune system has evolved innate and adaptive responses. The innate immune system is the rapid inflammatory response and recruits monocytes, macrophages and others. The adaptive response is the slower inflammatory response involving B and T cells to eliminate viruses.

Recently, investigation has accelerated in this field due to the novel coronavirus disease 2019 (COVID-19), an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The name coronavirus refers to its halo-like appearance; visually similar to a 'solar corona' around the virus particles when viewed under a microscope.

Proteintech has a variety of antibodies, ELISA kits and proteins to help understand and accelerate infectious disease research, including SARS-COV-2.

What's Inside

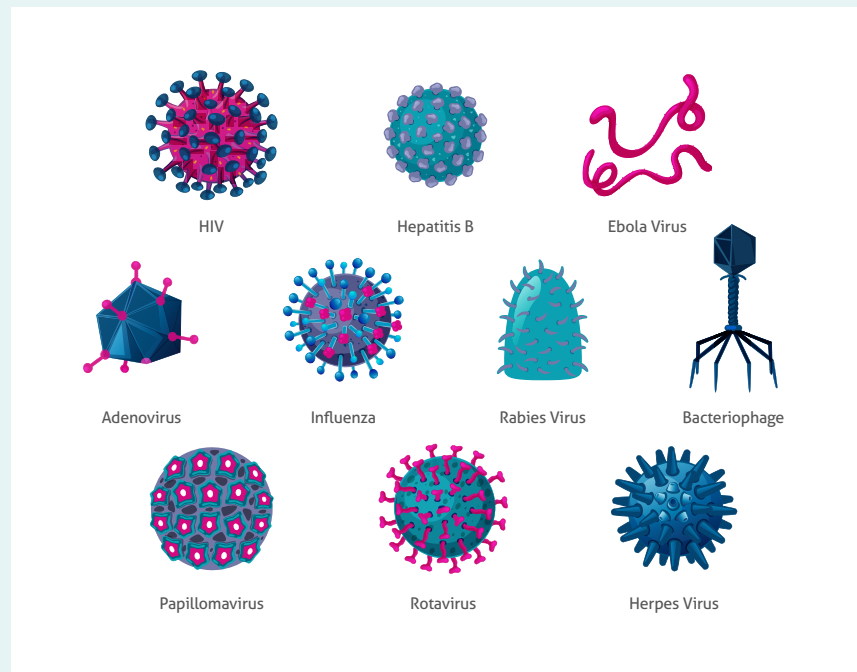
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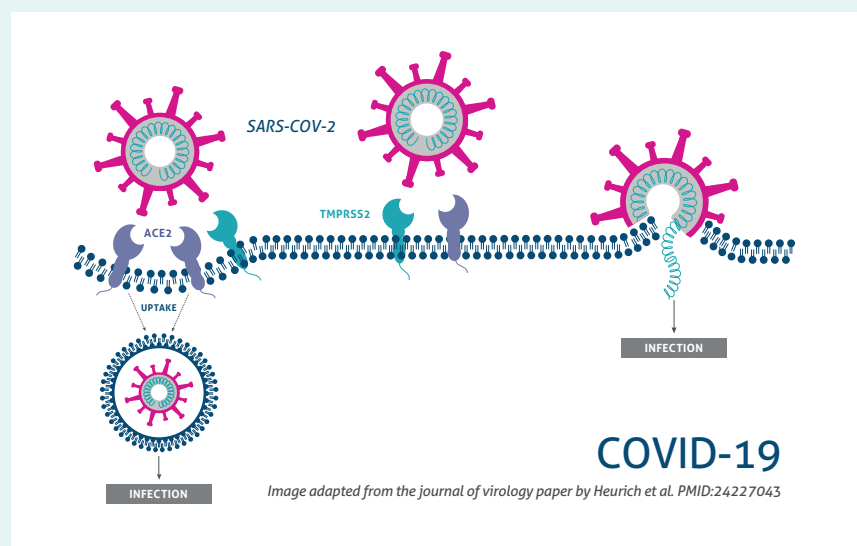
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MODELS

Major Viruses affecting Humans



COVID-19



Though our understanding of COVID-19 is limited thus far, Hoffman and colleagues recently in *Cell* (PMID: 32142651) detailed how the novel coronavirus uses ACE2 and

TMPRSS2 to gain access to the cell and replicate. Proteintech offers antibodies for both ACE2 and TMPRSS2 to accelerate your research on SARS-CoV-2 and other viruses.

PRODUCT FOCUS

ACE2 Antibody

Catalog Number
21115-1-AP

Type
Rabbit Polyclonal

Applications
IHC, WB, IP, ELISA

4 Publications

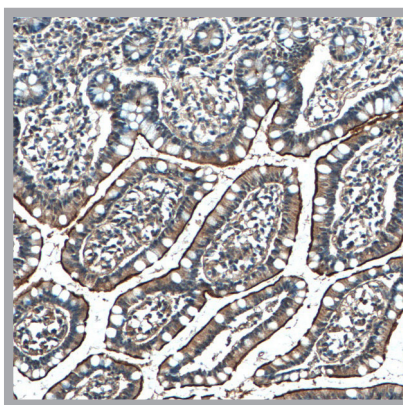
KD/KO Validated

Catalog Number
66699-1-Ig

Type
Mouse Monoclonal

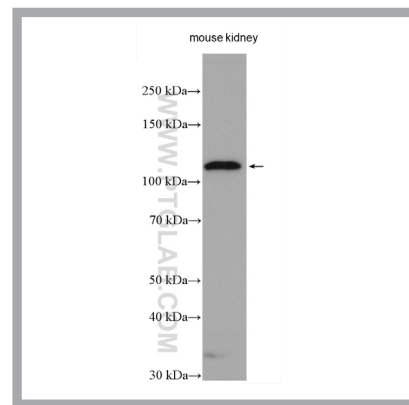
Applications
WB, IHC, ELISA

ACE2 (Angiotensin-converting enzyme 2), also known as ACEH, is a zinc metalloprotease of the ACE family and a critical regulator of the renin-angiotensin system. ACE2 is found predominantly in the heart, kidneys, testes, gastrointestinal system and lungs (PMID:15983030, 15141377). Recently, ACE2 has been shown to be a functional receptor of the human coronaviruses SARS-CoV and



Immunohistochemical analysis of paraffin-embedded human small intestine tissue slide using ACE2 antibody (66699-1-Ig, 1:300).

SARS-CoV-2 (PMID: 32142651). The expression level and expression pattern of human ACE2 in different tissues might be critical for the susceptibility, symptoms, and outcome of 2019-nCoV/SARS-CoV-2 infection (PMID: 32133153). It is an actively investigated therapeutic target for COVID-19 (PMID: 32125455).



Mouse kidney lysates were subjected to SDS-PAGE followed by Western blotting with ACE2 antibody (21115-1-AP, 1:1000).

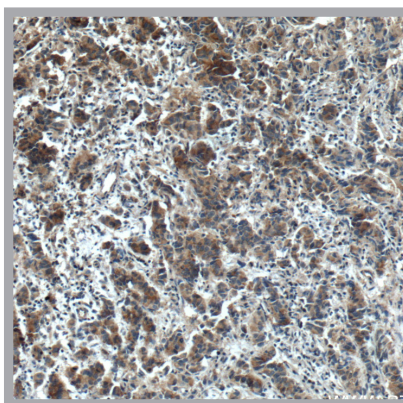
TMPRSS2 Antibody

Catalog Number
14437-1-AP

Type
Rabbit Polyclonal

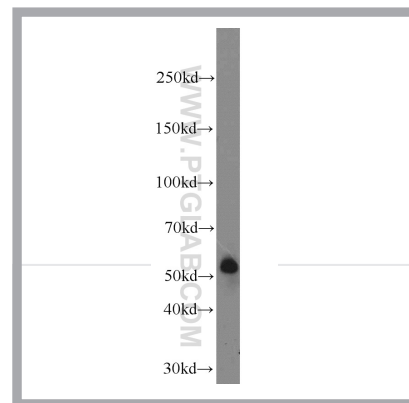
Applications
WB, IHC, ELISA

TMPRSS2, also known as PRSS10, is a type II transmembrane serine protease which is highly expressed by the epithelium of the human prostate gland and the lung. In influenza A and coronaviral infections, its proteolytic activity promotes host cell endocytosis of the viral particles which, in turn, increases viral



Immunohistochemical analysis of paraffin-embedded human prostate cancer tissue using TMPRSS2 antibody (14437-1-AP, 1:200).

proliferation (PMID: 23468491, 30626688). In COVID-19, TMPRSS2 proteolytically cleaves and activates the spike protein of SARS-CoV-2, facilitating virus-cell membrane fusion through interaction with ACE2 (PMID: 32142651, 30626688).



COLO320 cells were subjected to SDS-PAGE followed by Western blotting with TMPRSS2 antibody (14437-1-AP, 1:1000).

PRODUCTS AVAILABLE

SARS-CoV-2 Entry Mechanisms

Product Name	Cat. No.	Applications	Species reactivity
Human ACE2 polyclonal antibody ⁴	21115-1-AP	IHC, WB, IP	human, mouse, rat
Human ACE2 monoclonal antibody	66699-1-Ig	IHC, WB	human, mouse
ACE2 (Binding domain) fusion protein	ag30683		
ACE2 (C-terminal) fusion protein	ag15554		
Human TMPRSS2 polyclonal antibody	14437-1-AP	IHC, WB	human, mouse, rat

⁰⁰ This number shows the amount of times our antibody has been cited in a publication.

SARS-CoV-2 Viral Proteins

Product Name	Cat. No.	Domain	Affinity Tag	Host
nucleocapsid phosphoprotein	ag30676	1-419aa	6xHis	BL21(DE3)
membrane glycoprotein	ag30692	101-222aa	6xHis	BL21(DE3)
spike protein-RBD	ag30689	319-541aa	GST	BL21

Cytokine and Immune Response Products

Target	Rabbit poly	Mouse mono	Neutralizing	HumanKine®	ELISA Kit
CCL2/MCP1	25542-1-AP				KE00091
CCL3/MIP-1A					KE00092
CCL5					
CXCL10/IP0	10937-1-AP				KE00093
G-CSF	17185-1-AP			HZ-1207	KE00128
IFN gamma			69007-1-Ig	HZ-1301	KE00106 KE00063
IL1 beta	16806-1-AP	66737-1-Ig		HZ-1164	KE00146
IL-2	26156-1-AP	60306-1-Ig		HZ-1015	KE00021
IL-6	21865-1-AP	66146-1-Ig	69001-1-Ig	HZ-1019	KE00017 KE00007
IL-7		60206-1-Ig		HZ-1281	
IL-8	27095-1-AP				KE00139

Cytokine and Immune Response Products

Target	Rabbit poly	Mouse mono	Neutralizing	HumanKine®	ELISA Kit
	17038-1-AP				
IL-10	20850-1-AP	60269-1-Ig			KE00006 KE00012
IL-12				HZ-1256	KE00170
	17645-1-AP				
TGF-beta 1	21898-1-AP			HZ-1011	KE00019
TGF-beta 2	19999-1-AP			HZ-1092	KE00018
TGF-beta 3				HZ-1090	KE00002
TNF alpha	17590-1-AP	60291-1-Ig	69002-1-Ig	HZ-1014	KE00068 KE00154

Receptors of Viral Infection

Product Name	Cat. No.	Applications	Species reactivity
human CD13 Monoclonal antibody	CL488-66211	IF	human
human CD13 Polyclonal antibody ¹	14553-1-AP	FC, IF, IHC, WB	human, mouse, rat
CL594-human CD13 Monoclonal antibody	CL594-66211	IF	human
human CD13 Monoclonal antibody ³	66211-1-Ig	IF, IHC, WB	human
CL488-human CD13 Polyclonal antibody	CL488-14553	IF	human, mouse rat
human CD147 Monoclonal antibody	66443-1-Ig	IHC, WB	human, pig
CL594-human CD147 Monoclonal antibody	CL594-66443	IF	human, pig
human CD147 Polyclonal antibody ¹²	11989-1-AP	IHC, IP, WB	human, mouse
CL488-human CD147 Monoclonal antibody	CL488-66443	FC, IF	human, pig
human DPP4/CD26 Polyclonal antibody ⁵	10940-1-AP	IF, IHC, WB	human, hamster
human ACE2 Polyclonal antibody ⁴	21115-1-AP	IHC, IP, WB	human, mouse, rat
human ACE2 Monoclonal antibody	66699-1-Ig	IHC, WB	human
human CD9 Polyclonal Antibody ²⁵	20597-1-AP	IHC, WB, FC	human, pig
human CD9 Monoclonal Antibody ⁵	60232-1-Ig	WB, IHC	human, rat

⁰⁰ This number shows the amount of times our antibody has been cited in a publication.

Innate Immunity

Product Name	Cat. No.	Applications	Species reactivity
human IRF3 Monoclonal antibody	66670-1-Ig	IHC, WB,	human
human IRF3 Polyclonal antibody 42	11312-1-AP	FC, IF, IHC, IP, WB	human, mouse, rat
human IRF7 Polyclonal antibody 4	22392-1-AP	IHC, IP, WB	human
human MYD88 Monoclonal antibody 38	66660-1-Ig	WB	human, rat, mouse
human MYD88 Polyclonal antibody	23230-1-AP	WB	human
human NFKB1 Monoclonal antibody 74	66992-1-Ig	IF, WB	human
human NF-κB Polyclonal antibody 3	14220-1-AP	IF, IP, WB	human, rat
human NFKB1,p105,p50-Specific Polyclonal antibody 2	15506-1-AP	WB	human
human NFKB1 Polyclonal antibody 1	23576-1-AP	IF, IHC, WB	human
human NFKB2,p52,p100-Specific Polyclonal antibody	15503-1-AP	IHC, WB	human, mouse
human NFKB2 Monoclonal antibody	66920-1-Ig	WB	human
human NFKB2 Polyclonal antibody 9	51085-1-AP	WB	human, mouse
human NFKB2 Polyclonal antibody	10409-2-AP	IF, IHC, IP, WB	human, mouse, rat
CL594-human NF-κB p65 Monoclonal antibody	CL594-66535	IF	
CL488-human NF-κB p65 Monoclonal antibody 344	CL488-66535	IF	
human NF-κB p65 Polyclonal antibody 2	10745-1-AP	FC, IF, IHC, IP, WB	
human NF-κB p65 Monoclonal antibody 1	66535-1-Ig	IF, IHC, WB	
human STAT1 Monoclonal antibody 28	66545-1-Ig	IHC, WB	
human STAT1 Polyclonal antibody	10144-2-AP	FC, IF, IHC, IP, WB	human, rat
human STAT2 Monoclonal antibody 1	66485-1-Ig	WB	human, rat
human STAT2 Polyclonal antibody 3	51075-2-AP	IHC, WB	human, mouse, rat, pig
human STAT2 Polyclonal antibody 11	16674-1-AP	IHC, IP, WB	human
human TRAF6 Monoclonal antibody 7	66498-1-Ig	IF, IHC, WB	human, mouse
human IRF9 Polyclonal antibody 3	14167-1-AP	IF, IHC, IP, WB	human, mouse, rat
human TRIF/TICAM1 Polyclonal antibody 27	23288-1-AP	IHC, WB	human

Innate Immunity table continues next.

Innate Immunity

Product Name	Cat. No.	Applications	Species reactivity
human TMEM173/STING Polyclonal antibody	19851-1-AP	FC, IF, IHC, IP, WB	human, mouse, rat
CL488-human TMEM173 Polyclonal antibody	CL488-19851	IF	human
human TMEM173/STING Monoclonal antibody 1	66680-1-Ig	IHC, WB	human, rat
human NOD2 Monoclonal antibody 36	66710-1-Ig	WB	human
human NLRP3 Polyclonal antibody	19771-1-AP	WB	human
human AIM2 Monoclonal antibody 8	66902-1-Ig	WB	human, mouse, rat
human LGP2 Polyclonal antibody 6	11355-1-AP	IHC, IP, WB,	human,mouse,rat
Human C6orf150 Polyclonal antibody 1	26416-1-AP	IF, WB	human
human DDX58 Polyclonal antibody	25068-1-AP	IHC, IP, WB	human
human DDX58 Polyclonal antibody 9	20566-1-AP	IF, IP, WB	human,mouse
CL488-human IFIH1 Polyclonal antibody	CL488-21775	IF	human,mouse
human IFIH1/MDA5 Polyclonal antibody 10	21775-1-AP	IHC, IP, WB	human
human IFIH1/MDA5 Monoclonal antibody	66770-1-Ig	IHC, WB	human
human TLR1 Polyclonal antibody	19816-1-AP	IHC	human,mouse,rat
human TLR2 Monoclonal antibody	66645-1-Ig	WB	human
human TLR3 Polyclonal antibody 3	17766-1-AP	FC, IHC	human
human TLR4 Monoclonal antibody 6	66350-1-Ig	IHC, WB	human, mouse,rat,pig
human TLR4 Polyclonal antibody 117	19811-1-AP	IHC, WB	human, mouse, rat
human TLR5 Monoclonal antibody	66570-1-Ig	WB	human,pig,mouse,rat
human TLR5 Polyclonal antibody 3	19810-1-AP	IHC, IP	human, mouse
human TLR6 Polyclonal antibody 3	22240-1-AP	WB	human, mouse
human TLR7 Polyclonal antibody 2	17232-1-AP	IHC, WB	human,mouse,rat
human TLR8 Monoclonal antibody	67317-1-Ig	IHC, WB	human

00 This number shows the amount of times our antibody has been cited in a publication.

Immune Response

Product Name	Cat. No.	Applications	Species reactivity
FITC-human CD28 Monoclonal antibody	FITC-65099	FC	human
APC-human CD28 Monoclonal antibody	APC-65099	FC	human
PE-human CD28 Monoclonal antibody	PE-65099	FC	human
PE-human CD80 (B7-1) Monoclonal antibody	PE-65083	FC	human
human CD80/B7-1 Polyclonal antibody ¹	14292-1-AP	FC, WB	human, mouse
human CD80/B7-1 Monoclonal antibody ⁴	66406-1-Ig	IHC, WB	human, mouse, pig
human CD86 (C-terminal) Polyclonal antibody	26903-1-AP	WB	human
human CD86 Polyclonal antibody ¹¹	13395-1-AP	FC, IF, WB	human

⁰⁰ This number shows the amount of times our antibody has been cited in a publication.

Cytokines and Growth Factors

Product Name	Cat. No.	Applications	Species reactivity
human IFN alpha Polyclonal antibody ³	18013-1-AP	WB	human
human IFN alpha Monoclonal antibody ¹	66162-1-Ig	WB	human
Human NeutraKine™ IFN gamma Monoclonal antibody	69007-1-Ig	Neutralization	human
human IL2 Monoclonal antibody ²	60306-1-Ig	IHC, WB	human
Human NeutraKine™ IL-4 Monoclonal antibody	69005-1-Ig	Neutralization	human
human IL-4 Monoclonal antibody ⁷	66142-1-Ig	IHC, WB	human
human IL-7 Monoclonal Antibody ²	60206-1-Ig	WB, IF, FC	human
human IL10 Polyclonal antibody ²⁰	20850-1-AP	WB, IHC, IF	human, mouse, rat
human IL10 Monoclonal antibody ⁵	60269-1-Ig	WB, IHC, FC	human
human G-CSF Polyclonal antibody ¹	17185-1-AP	IHC, IF	human
human CXCL10/IP10 Polyclonal antibody	10937-1-AP	IHC	human
human MCP1 Polyclonal antibody ¹²	25542-1-AP	IHC, IF, FC	human, mouse, rat
mouse Mcp1 Monoclonal antibody ¹⁷	66272-1-Ig	WB, IHC, IF	mouse, rabbit, rat

⁰⁰ This number shows the amount of times our antibody has been cited in a publication.

NeutraKine™ Human Cytokine Neutralizing Antibodies

Product Name	Cat. No.	Applications	Species reactivity
NeutraKine™ Beta NGF Antibody	69009-1-Ig	Neutralization	human
NeutraKine™ GM-CSF Antibody	69003-1-Ig	Neutralization	human
NeutraKine™ IL-3 Antibody	69004-1-Ig	Neutralization	human
NeutraKine™ IL-4 Antibody	69005-1-Ig	Neutralization	human
NeutraKine™ IL-6 Antibody	69001-1-Ig	Neutralization	human
NeutraKine™ IL-23 Antibody	69006-1-Ig	Neutralization	human
NeutraKine™ IFN Alpha 2A Antibody	69008-1-Ig	Neutralization	human
NeutraKine™ IFN Gamma Antibody	69007-1-Ig	Neutralization	human
NeutraKine™ TNF Alpha Antibody	69002-1-Ig	Neutralization	human

Degradation of Viral RNA

Product Name	Cat. No.	Applications	Species reactivity
human OAS1 Polyclonal antibody ³	14955-1-AP	IF, IHC, WB	human,mouse,rat
human OAS2 Polyclonal antibody ⁵	19279-1-AP	IF, IHC, IP, WB	human,mouse
human OAS3 Polyclonal antibody	21915-1-AP	WB, IHC, IF	human

⁰⁰ This number shows the amount of times our antibody has been cited in a publication.

Antiviral/ Infection Inhibition

Product Name	Cat. No.	Applications	Species reactivity
human CLTA Polyclonal antibody ¹⁷	10852-1-AP	IF, IHC, IP, WB	human,mouse,rat
human IFITM1 Polyclonal antibody ¹⁸	11727-3-AP	FC, IHC, IP, WB	human
human IFITM1-Specific Monoclonal antibody ²⁷	60074-1-Ig	IHC, IP, WB	human, rat
human IFITM2/3 Monoclonal antibody ⁸	66081-1-Ig	FC, IF, IHC, WB	human
human IFITM3 Polyclonal antibody ⁵⁴	11714-1-AP	FC, IF, IHC, IP, WB	human, mouse, rat
human IFITM2 Polyclonal antibody ²⁷	12769-1-AP	IF, IHC, IP, WB	human
human IFITM2-specific Monoclonal antibody ⁷	66137-1-Ig	FC, WB	human

⁰⁰ This number shows the amount of times our antibody has been cited in a publication.

Inhibition of viral Protein Translation and Viral Replication

Product Name	Cat. No.	Applications	Species reactivity
human G1P3 Polyclonal antibody ¹	11246-1-AP	IHC	human
human IFIT2 Polyclonal antibody ¹¹	12604-1-AP	IF, IHC, IP, WB	human, mouse
human IFIT1 Polyclonal antibody ⁴	23247-1-AP	IHC, WB	human, mouse, rat
human IFIT3 Monoclonal antibody	67208-1-Ig	IHC, WB	human
human IFIT3 Polyclonal antibody ⁹	15201-1-AP	IF, IHC, IP, WB	human
human EIF2AK2 Monoclonal antibody	66646-1-Ig	IHC, WB	human
human EIF2AK2, PKR Polyclonal antibody ⁶	18244-1-AP	IF, IHC, IP, WB	human, mouse, rat
human ISG15 Polyclonal antibody ¹⁶	15981-1-AP	IF, IHC, IP, WB	human
human IFIT5 Polyclonal antibody ³	13378-1-AP	IHC, IP, WB	human
human RyDEN Polyclonal antibody	27865-1-AP	WB	human, mouse, rat
human MX1 Polyclonal antibody ⁴⁹	13750-1-AP	IF, IHC, IP, WB	human, mouse
human ZC3HAV1 Monoclonal antibody	66413-1-Ig	IF, IHC, WB	human
CL594-human ZC3HAV1 Monoclonal antibody	CL594-66413	IF	human
CL488-human ZC3HAV1 Monoclonal antibody	CL488-66413	IF	human
human ZC3HAV1 Polyclonal antibody ¹²	16820-1-AP	IHC, IP, WB	human, mouse, rat
human PARP9 Polyclonal antibody ³	17535-1-AP	IHC, IP, WB	human, rat
human RSAD2 Polyclonal antibody	28089-1-AP	WB	human
human DTX3L Polyclonal antibody	11963-1-AP	WB	human

⁰⁰ This number shows the amount of times our antibody has been cited in a publication.

IgM & IgG

Product Name	Cat. No.	Applications	Species reactivity
human IgM Monoclonal antibody	66484-1-Ig	WB, IHC, IF	human
CL488-human IgM Monoclonal antibody	CL488-66484	WB, IHC, IF	human
CL594-human IgM Monoclonal antibody	CL594-66484	WB, IHC, IF	human
human IgM Polyclonal antibody	11016-1-AP	WB, IHC	human
Rabbit Anti-Human IgG	10284-1-AP	WB, IHC	human
HRP-Conjugated Human IgM Antibody	HRP-66484	WB, ELISA	human

Cathepsin and other Proteases

Product Name	Cat. No.	Applications	Species reactivity
human Cathepsin B Polyclonal antibody ¹³	12216-1-AP	FC, IF, IHC, WB	human, mouse
human Cathepsin L Polyclonal antibody ⁴	10938-1-AP	IHC, WB	human
human ADAM17-Specific Polyclonal antibody ¹	20259-1-AP	IHC, WB	human
human ADAM17 Polyclonal antibody	24620-1-AP	IHC, WB	human
human TMPRSS2 Polyclonal antibody	14437-1-AP	IHC, WB	human,mouse,rat

⁰⁰ This number shows the amount of times our antibody has been cited in a publication.

TRIM Family

Product Name	Cat. No.	Applications	Species reactivity
human TRIM22 Polyclonal antibody ²	13744-1-AP	IHC, WB	human, mouse
human TRIM32 Polyclonal antibody ²	10326-1-AP	IF, IHC, WB	human,mouse,rat
human TRIM11 Polyclonal antibody ³	10851-1-AP	IHC, WB	human
human TRIM5 Polyclonal antibody	11476-1-AP	WB	human, mouse
human TRIM5 Monoclonal antibody	67492-1-Ig	WB	human
human TRIM15 Polyclonal antibody ³	13623-1-AP	IF, WB	human, mouse

⁰⁰ This number shows the amount of times our antibody has been cited in a publication.

Related Signaling Antibodies

Product Name	Cat. No.	Applications	Species reactivity
human CD209 Polyclonal Antibody	25404-1-AP	WB, FC	human
human ICAM3 Polyclonal Antibody	17699-1-AP	WB, IP, IHC, FC	human
human CLEC4M Polyclonal Antibody	22003-1-AP	IHC	human
human STAT3 Polyclonal Antibody 92	10253-2-AP	WB, IP, IHC, IF, FC, CoIP, ChIP	human, mouse, rat, marmoset
human STAT3 Monoclonal Antibody 7	60199-1-Ig	WB, IP, IHC, IF	human, mouse, rat
human Fibronectin Polyclonal Antibody 148	15613-1-AP	WB, IP, IF	human, mouse, rat, porcine
human Fibronectin Monoclonal Antibody 11	66042-1-Ig	WB, IP, IHC, IF	human, mouse, rat
human AGTR1 Monoclonal Antibody	66415-1-Ig	WB	human, mouse, rat, pig
human AGTR1 Polyclonal Antibody 9	25343-1-AP	WB, IHC, IF	human, mouse, rat
human FAK Polyclonal Antibody 29	12636-1-AP	WB, IP, IHC, IF	human, mouse, rat
human FAK Monoclonal Antibody 8	66258-1-Ig	WB, IHC, IF	human, mouse, rat
human Angiotensinogen Polyclonal Antibody 7	11992-1-AP	WB, IHC, FC	human, mouse
human Angiotensinogen Monoclonal Antibody	60126-1-Ig	WB, IHC	human
human Renin Polyclonal Antibody 9	14291-1-AP	WB, IHC, IF	human, mouse, rat
human IFNAR1 Polyclonal Antibody 2	13083-1-AP	WB, IF, FC	human
human IFNAR2 Polyclonal Antibody	10522-1-AP	WB, FC	human

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