VDx® ASFV qPCR

African Swine Fever Virus real time PCR kit

Advantages of VDx® ASFV qPCR

- Confirmatory diagnosis of ASFV
- High sensitivity and specificity
- High reproducibility and high repeatability
- Applicable to all suspect specimens (blood, tissue, feces, livestock processed goods, and food wastes)
- Most conserved p72 gene targeting for detecting all genotypes of ASFV

Performances of VDx® ASFV qPCR

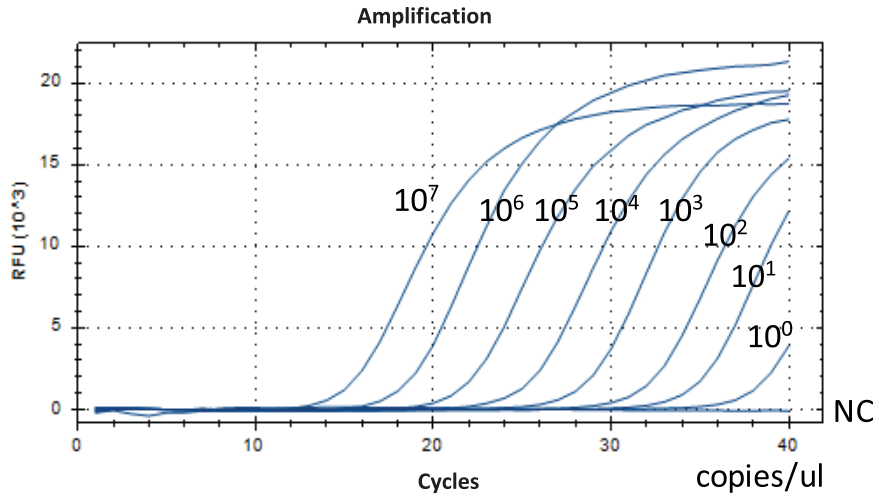
- Detection limit: **1copy/㎕**
- Sensitivity: **100%**
- Specificity: **100%**
- Cross reactivity: **0%**

testing 19 kinds of bacteria and viruses including CSFV

Cut-off

- Less than Ct-value 40 : **Positive**

Detection limit of VDx® ASFV qPCR



Detection limit
: 1 copy/㎕

Performances of VDx® ASFV qPCR

Sensitivity for standard DNA of ASFV genotypes

No	Sample (1/10x)	Country of origin	Year	P72 genotype	VDx® qPCR		No	Sample (1/10x)	Country of origin	Year	P72 genotype	VDx® qPCR	
					Ct	Result						Ct	Result
1	E70	Spain	1970	I	**27.69**	POS	13	MOL16/DP-CERNO1	Moldova	2016	II	**31.7**	POS
2	BF07/IqTC	Burkina Faso	2007	I	**25.71**	POS	14	MOL16/DP-MOSA1	Moldova	2016	II	**32.01**	POS
3	SS14/WB-Sassari1	Italy	2014	I	**32.72**	POS	15	Moz64	Mozambique	1964	V	**27.37**	POS
4	SS14/DP-Cagliari1	Italy	2014	I	**35.44**	POS	16	MwLil 20/1	Malawi	1983	VIII	**31.7**	POS
5	Arm07	Armenia	2007	II	**28.99**	POS	17	Ken11/KisP52	Kenya	2011	IX	**30.41**	POS
6	Ukr12/Zapo	Ukraine	2012	II	**29.05**	POS	18	Ken06.Bus	Kenya	2006	IX	**29.54**	POS
7	Ukr15/DP-Kieve 1	Ukraine	2015	II	**29.24**	POS	19	Ken08Tk.2/1	Kenya	2007	X	**28.27**	POS
8	LT14/1490	Lithuania	2014	II	**29.88**	POS	20	UG10/Tk3.2	Uganda	2010	X	**33.81**	POS
9	Pol14/Krus	Poland	2014	II	**29.74**	POS	21	Eth13/1505	Ethiopia	2013	XXIII	**31.24**	POS
10	Lv14/DP/Robez3	Latvia	2014	II	**32.89**	POS	22	PC				**22.4**	
11	Est14/WB-Valga-1	Estonia	2014	II	**32.5**	POS	23	NC				**N/A**	
12	Est15/Wb-Tartu14	Estonia	2015	II	**32.23**	POS							

Sensitivity and specificity for ASFV-positive and negative tissues and sera

No	Sample	Clinical	Isolate	Genotype	OIE qPCR	VDx® qPCR(Ct)	No	Sample	Clinical	Isolate	Genotype	OIE qPCR	VDx® qPCR(Ct)
1	S17	Acute	Ukr12/Zapo	II	3+	**25.03**	11	S27	Tonsil			-	-
2	S18	Chronic	NH/P68	I	+	**33.74**	12	S28	Acute	Ukr12/Zapo	II	3+	**26.24**
3	S19	Acute	L60	I	3+	**24.2**	13	S29	S28, 1/50x			3+	**24.55**
4	S20	Subacute	Ken05/Tk1	X	3+	**23.52**	14	S30	S28, 1/400x			2+	**28.21**
5	S21	Acute	Arm07	II	3+	**24.48**	15	S31(Serum)	Serum			-	-
6	S22	Acute	Ken06.bus	IX	3+	**23.11**	16	S32	Acute	Ukr12/Zapo	II	+	**29.07**
7	S23	S17, 1/200x			+	**33.16**	17	PC					**22.97**
8	S24	S22, 1/200x			2+	**31.06**	18	NC					-
9	S25	Kidney			-	-	19						
10	S26	Lung			-	-	20						

Cross reactivity of VDx® ASFV qPCR with 19 different pathogens (12 viruses, 7 bacteria)

No	Pathogens	Strain	Concentration	Result
1	PRRSV	PL96-1	10^4 $TCID_{50}$/ml	NEG
2	PRRSV	Lelystad	10^2 $TCID_{50}$/ml	NEG
3	EMCV	VR129	$10^{6.5}$ $TCID_{50}$/ml	NEG
4	JEV	Nakayama	$10^{4.8}$ $TCID_{50}$/ml	NEG
5	CSFV	LOM	10^5 $TCID_{50}$/ml	NEG
6	SIV	H1N2	10^5 $TCID_{50}$/ml	NEG
7	ADV	YS	10^5 $TCID_{50}$/ml	NEG
8	PPV	PV9	10^5 $TCID_{50}$/ml	NEG
9	PCV2	field isolation	10^5 $TCID_{50}$/ml	NEG
10	PEDV	SM98	10^5 $TCOD_{50}$/ml	NEG
11	TGEV	Pyeong Taek	10^4 $TCOD_{50}$/ml	NEG
12	Rotavirus	OSU	$2x10^3$ $TCOD_{50}$/ml	NEG
13	App 2	ATCC27089	$3.2X10^6$CFU/ml	NEG
14	App 5	ATCC33377	$2X10^6$CFU/ml	NEG
15	P.m._A	ATCC43137	$2.1X10^6$CFU/ml	NEG
16	P.m._D	ATCC12948	$2.2X10^6$CFU/ml	NEG
17	M.hyo	J	-	NEG
18	H.p.	ATCC19417	$4.28X10^5$CFU/ml	NEG
19	Sal. typhi.	Sal13	-	NEG