

Table S1: Summary of Technology Assessments for EBOV

Commercial and regulated assays for EBOV are presented, as well as laboratory designed tests. Legacy in-house assays without formal regulation or clinical validation are not presented here, as they have limited or dated information for sensitivity/specificity/LOD.

Developer	System	Regulatory status	Sample type	Target	LOD	Sensitivity/PPA	Specificity/NPA	Specimens tested	Reference Assay	Capability to multiplex
Molecular Diagnostics										
Alere (now Abbott)	Alere q Filovirus Detect (w/ Alere q platform)	N/A ¹	Venous or finger stick blood,	RNA, L gene	no info	no info	no info	no info	no info	yes
Altona Diagnostics GmbH (Ger)	RealStar® Filovirus Screen RT-PCR Kit 1.0 (Human pathogenic Filovirus species)	WHO EUAL, FDA EUA	Plasma	RNA	1250 copies/mL	82%	100%	328 plasmas	Trombley	yes
AmpliSense/Ecoli	AmpiSensEBOV Zaire-FRT	RUO	All	RNA	2.00x10 ³ GM/mL	95%	100%	no info	no info	no info
Biocartis	Idylla Ebola Virus Triage Test with Idylla Platform	FDA EUA, N/A ²	Whole blood	RNA	216 pfu/mL or 178 copies/mL	97%	100%	Spiked samples	DoD Ebola Zaire (EZ1) rRT-PCR method on the ABI 7500 Fast Dx Real-Time PCR System	-
Biomerieux	FilmArray BioThreat E (ZEBOV only), BioThreat Kit (16 pathogen multiplex) Global Fever Panel	WHO EUAL (ZEBOV), RUO	Venous blood, urine	RNA	6.00x10 ⁵ pfu/mL (WB), 6.00x10 ³ for spiked samples	96%	100%	no info	Whole blood (WB), spiked samples	yes

¹ Product development ceased.

² Product purchasing unclear; development ceased.

Developer	System	Regulatory status	Sample type	Target	LOD	Sensitivity/PPA	Specificity/NPA	Specimens tested	Reference Assay	Capability to multiplex
BioGene, Ltd. (UK)	EbolaCheck on QuRapid platform	In dev	Whole blood	RNA, GP and human ribonuclease	1400 PFU/mL	no info	no info	Whole blood	Trombley	no info
Bioneer (KOR)	1. AccuPower® EBOV Real-Time RT-PCR Kit 2. AccuPower® EBOV Quantitative RT-PCR Kit	CE	Serum, plasma	RNA, NP Gene	47.86 copies/test	no info	no info	no info	no info	no
Cepheid	Xpert Ebola w/ XpertPlatform	WHO EUAL	Venous blood	RNA, NP and GP	0.13 pfu/mL	WB:100%, BS: 100%	WB: 99.5%, BS: 100%	whole blood, n=218; buccal swab, n=71	Trombley	yes
Coyote Bioscience (CN)	EBOV POC test with Mini-8 Real Time PCR platform	RUO	Whole blood	RNA	500 copies/mL	99.30%	97.90%	428 WB samples and 132 swab samples from corpses	no info	yes
Genekam	5 species-related Ebola RT-PCR kits	RUO	no info	RNA	no info	no info	no info	no info	no info	yes
genesig (UK) (Primerdesign Ltd)	Ebola 2014 Easy EBOV SUDV (genesig q16 PCR instrument)	RUO	All	RNA, NP	<100 copies/mL	no info	100% (manufacturer claim)	no info	no info	yes
Liferiver (Shanghai ZJ Bio-Tech Co.)	Ebola Virus Real Time RT-PCR Kit	CE, WHO EUAL	Plasma, serum, whole blood, oral swab	RNA, EBOV + Zaire specific	23.9 copies/reaction	-	no info	no info	In-house	yes

Developer	System	Regulatory status	Sample type	Target	LOD	Sensitivity/PPA	Specificity/NPA	Specimens tested	Reference Assay	Capability to multiplex
Lipsdiag	LipsGene SUDV	RUO	Serum, plasma, amniotic or synovial fluid	RNA	no info	no info	100% (manufacturer claim)	no info	no info	yes
Lucigen	N/A	in dev	Fingerstick blood, cheek?	RNA, NP	no info	no info	no info	no info	in-house	no info
MicoNanobiosys	Ebola RT-PCR kit for Nanobiosys Sample Prep G2-16TU, Nanobiosys Real-time PCR G2-4	in dev	no info	RNA	no info	no info	no info	no info	no info	no info
Optigene/Toshiba Medical Systems	EBOV by RT-LAMP	RUO	no info	RNA	no info	100% and 97.9% for the trailer and nucleoprotein primer sets, respectively	100%	100 (serum, n=44; oral swab, n=56)	no info	no info
Sacace Biotechnologies	Ebola Zaire Real-TM (for use w/ SaMag Automatic Nucleic Acid Extraction instrument)	RUO	Whole Blood, Plasma, Saliva, Tissue	NP protein	>400 copies/mL	no info	100%	no info	no info	yes
ThermoFisher	Ebola Virus NP Real-Time PCR Assay (CDC Assay)	FDA EUA, RUO	Whole blood, serum, plasma	RNA, NP	62.5 copies/mL	99.80%	no info	no info	Altona + 9 other assays	no info
TIB MolBio (USA)	LightMix Ebola Zaire rRT-PCR Test (TIB Molbiol) w/ LightCycler (Roche)	FDA EUA, RUO	Whole blood	RNA	4,781 pfu/mL	95%	100%	no info	no info	no
GenArraytion Inc. for Luminex xMAP or TaqMan	BioThreat MULTIFLEX™, Febrile Associated Pathogens MULTIFLEX® 2	RUO	All	RNA	no info	no info	no info	no info	no info	yes

Developer	System	Regulatory status	Sample type	Target	LOD	Sensitivity/PPA	Specificity/NPA	Specimens tested	Reference Assay	Capability to multiplex
Serology										
Zalgen Labs, LLC	ReEBOV VP40 Antigen ELISA test kit	RUO	Whole blood, serum	<u>VP40 protein</u>	no info	no info	no info	no info	no info	no info
Zalgen Labs, LLC	ReEBOV IgG/IgM ELISA test kit	RUO	Whole blood, serum	no info	no info	no info	no info	no info	no info	no info
RDTs										
BIOCREDIT/Rapigen	Biocredit Ebola Ag Rapigen	RUO	Whole blood, plasma, or serum	no info	no info	no info	no info	no info	no info	no info
InTec (CN)	One Step Ebola Test	RUO	Whole blood, plasma, or serum	no info	no info	ALTONA: Plasma: 98.43% TROMBLEY: plasma: 86.61%	ALTONA: Plasma: 80.2% and whole blood: 95% TROMBLEY: plasma - 84.71%	-	Altona + Trombley	yes
Lifeassay	N/A	RUO	no info	no info	no info	no info	no info	no info	no info	no info
Orasure (USA)	OraQuick Ebola Rapid Antigen Test	WHO EUAL, FDA EUA	Oral fluid, whole blood	VP40 antigen	53,000 pg/mL	84% (whole blood) 94% (buccal swab)	98% (whole blood), 100% (buccal swab)	244 buccal swab samples, 75 whole blood samples	-	-
Otsuka Pharmaceutical Co., Ltd. (JPN)	QuickNavi-EBOLA	In dev	no info	no info	no info	no info	no info	no info	no info	no info
SD Biosensor (KOR)	SD Q Line Ebola Zaire Ag	WHO EUAL	Plasma, serum, fingerstick	GP, NP, VP40	no info	ALTONA: Plasma: 84.5% TROMBLEY: plasma: 70.511%	ALTONA: Plasma: 98.99% and whole blood: 100% TROMBLEY: plasma - 99.42%	1) 100 whole blood and 346 stored plasmas	1) Trombley + Altona	yes

Developer	System	Regulatory status	Sample type	Target	LOD	Sensitivity/PPA	Specificity/NPA	Specimens tested	Reference Assay	Capability to multiplex
Public Health Canada	IgG ELISA	N/A	Serum	IgG	no info	no info	no info	no info	no info	no info
Defence Science and Technology Laboratory (DSTL)	EBOV lateral flow assay	N/A	Capillary blood	no info	no info	no info	no info	131 fresh whole blood samples (capillary and venous blood)	Altona RealStar® Filovirus RT-PCR	N/A
Naval Medical Research Center (NMRC)	EBOV lateral flow immunoassay	N/A	Blood samples, oral swabs	no info	no info	no info	no info	290 plasma samples, 237 oral swabs	rRT-PCR GP and NP assays	N/A