



Co-Dx Logix Smart™ ZDC

Innovating Molecular Diagnostic Solutions

Co-Dx Logix Smart™ ZDC is a real-time CE-IVD PCR multiplex test intended to detect Zika, dengue (types 1, 2, 3, and 4), and chikungunya viruses through extracted ribonucleic acid (RNA) from serum, plasma, CSF, and urine from symptomatic or asymptomatic patients. According to CDC, Real-time PCR technology is the preferred method when testing for these arboviruses due to its higher sensitivity and specificity when compared to other technologies (CDC, Division of Vector-Borne Diseases, 2016). Logix Smart™ ZDC offers a rapid, accurate, and inexpensive molecular diagnostic test to help in the global fight against these mosquito-borne diseases.

Logix Smart™ ZDC has been validated with the QIAamp RNA Mini (QIAGEN) extraction kit and run in the Co-Dx Box™ instrument, for more information on other machines and extraction systems contact Co- Diagnostics, Inc.

- Compatible with multiple sample types
- Contains a simple and streamlined work flow
- Includes internal control to verify sample quality
- Includes positive control
- Produces results that are easy to interpret
- Compatible with multiple platforms & sample extraction techniques



Product Performance Characteristics

Application	Qualitative Multiplex PCR test, screening for ZIKV, DENV (types 1,2,3 and 4) and CHIKV					
Limit of detection	Markers	Specimen	Strain		Claimed LOD	
			ZIKV	Plasma	Asian lineage (PRVABC59, whole virus)	1.52×10 ⁴ copies/mL
				Serum	Asian lineage (PRVABC59, RNA extract)	3.19×10 ⁴ copies/mL
				Urine		6.23×10 ⁴ copies/mL
	CSF (cerebrospinal fluid)		4.83×10 ⁴ copies/mL			
	DENV	Plasma	DENV 1 (synthetic template)		8.21×10 ⁴ copies/mL	
			DENV 1 (Hawaii, whole virus)		4.03×10 ² PFU/mL	
			DENV 2 (New Guinea C, RNA extract)		9.08×10 ⁴ copies/mL	
			DENV 2 (New Guinea C, whole virus)		7.27×10 PFU/mL	
			DENV 3 (H87, RNA extract)		5.05×10 ⁴ copies/mL	
			DENV 3 (H87, whole virus)		1.91×10 ² copies/mL	
			DENV4 (H241, RNA extract)		2.69×10 ⁵ copies/mL	
			DENV4 (H241, whole virus)		6.13×10 ² PFU/mL	
	CHIKV	Serum	S27 Petersfield, RNA extract		1.03×10 ³ copies/mL	
Plasma		ECSA lineage, (WHO reference strain, R91064, whole virus)		4.27×10 ³ copies/mL		
Diagnostic Sensitivity		Serum	Plasma	Urine	CSF	
	ZIKV†	97.2%	93.2%	91.4%	96.0%	
	DENV†	98.0%	99.3%	Not Performed	Not Performed	
	CHIKV†	99.0%	94.4%	Not Performed	Not Performed	
Diagnostic Specificity	ZIKV†	100%	100%	100%	100%	
	DENV†	100%	100%	Not Performed	Not Performed	
	CHIKV†	100%	100%	Not Performed	Not Performed	
Specimen	ZIKV: Plasma, serum, urine, and CSF. DENV and CHIKV: serum and plasma.					
Genotype detection	None (including no differentiation of Dengue types 1, 2, 3, or 4)					
Detection details	Detection and differentiation of Zika, Dengue, and Chikungunya viruses.					
Time to detection	63-90 minutes, depending on the machine used					
Thermal cycler compatibility	Most qPCR systems capable of the following channel compatibilities: FAM CF560 (VIC) CF610(ROX) Quasar670(Texas Red)					

† Results based on 4,853 contrived samples extracted using QIAamp RNA Mini kit and run on the CoDx Box™.
Note: ZIKV, Zika virus; DENV, dengue virus; CHIKV, chikungunya virus.

Each Co-Dx Logix Smart™ ZIKV kit includes:

- 1×500 µL (100rxns) Logix Smart™ ZDC Master Mix
- 1×500 µL (100rxns) Logix Smart™ ZDC Positive Control
- 1×500 µL (100rxns) Nuclease Free Water

Ordering Information:

Product Name	Product ID
Co-Dx Box™ Thermal Cycler	Request quote
Co-Dx Logix Smart™ ZDC kit	ZDC-K-001