

Product Specification

SoliSD™ Bsm DNA Polymerase Kit

Cat. No: 32-21-0250R

32-21-0000S

Kit components: SoliSD™ Bsm DNA Polymerase (8 U/μl)

10x Isothermal Reaction Buffer

100 mM MgSO₄

25x SoliSD™ Supplement

10x GC-rich Enhancer

Shelf life: 24 months at -20°C (-18°C to -28°C)

Storage and stability*: Routine storage at -20°C (-18°C to -28°C) until Expiry Date. Shipping and temporary storage for up to 1 month at 25°C or up to 6 months at 4°C (2°C to 8°C) has no detrimental effects on the quality of the product. Freeze-thaw stability: 15 cycles.

Shipping conditions: at room temperature

FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES.

Quality Control Assays:

SoliSD™ Bsm DNA Polymerase Kit components (SoliSD™ Bsm DNA Polymerase, 10x Isothermal Reaction Buffer, 100 mM MgSO₄, 25x SoliSD™ Supplement, 10x GC-rich Enhancer):

Assay	Specification (QC passing criteria)
Functional testing via qLAMP	qLAMP is performed using 10-fold serial dilutions of human genomic DNA and lambda DNA template, resulting in a dynamic range of 2 and 3 orders of magnitude, respectively.
qLAMP reproducibility	The functional performance of each new lot of SoliSD™ Bsm DNA Polymerase Kit is compared with the previous lot via qLAMP using several primer pairs. The Ct value difference between lots is ≤1.
qLAMP repeatability	The standard deviation across technical replicates is <0.8 Ct.
DNA and RNA contamination	The amplification curve of NTC (no template control) remains below the fluorescence threshold through 75 qLAMP cycles.

SoliSD™ Bsm DNA Polymerase:

Assay	Specification (QC passing criteria)
Strand displacement testing via fluorescence assay	A fluorescence assay with labelled oligonucleotide substrate is performed using serial dilutions of the enzyme. Strand displacement activity is determined by the reaction rate.
Functional testing via qLAMP	qLAMP is performed using 10-fold serial dilutions of human DNA and lambda DNA template, resulting in a dynamic range of 2 and 3 orders of magnitude, respectively.
qLAMP reproducibility	The functional performance of each new lot of SoliSD™ Bsm DNA Polymerase is compared with the previous lot via qLAMP using several primer pairs. Ct value difference between lots is ≤2.
qLAMP repeatability	The standard deviation across technical replicates is <0.8 Ct.
DNA and RNA contamination	The amplification curve of NTC (no template control) remains below the fluorescence threshold through 75 qLAMP cycles.

Protein purity assay (SDS-PAGE)	The purity of SoliSD™ Bsm DNA Polymerase is determined by SDS-PAGE analysis. SoliSD™ Bsm DNA Polymerase purity is at least 85% and gives band at 71 kDa.
DNase/RNase residue detection	qPCR is performed using 10-fold serial dilutions of DNase I or RNase I template, resulting in a dynamic range of 5 orders of magnitude.
Endodeoxyribonuclease activity	Reaction is performed in 50 µl of 10x Isothermal Reaction Buffer containing 10 units of SoliSD™ Bsm DNA Polymerase and 1 µg of pUC19 DNA. Incubation for 4 hours at 60°C results in no detectable nuclease degradation in agarose gel.
Exodeoxyribonuclease activity	Reactions are performed in 50 µl of 10x Isothermal Reaction Buffer containing 10 units of SoliSD™ Bsm DNA Polymerase and 1 µg of lambda DNA or 1 kb DNA Ladder, respectively. Incubation for 4 hours at 60°C results in no detectable nuclease degradation of either target in agarose gel.

PS-32-21 v1
Effective from 18.12.2023

APPROVED BY:

Eva-Maria Oja
Head of Quality and Product Management



****Product functionality** is assessed using routine QC assays and QC criteria set forth in the Product Specification herein. **Product stability** is assessed using set QC stability criteria and is intended to provide guidelines for shipping and storage conditions only. The client or its designee shall be responsible for conducting all necessary stability and functionality testing applicable to their assay and/or QC criteria, and to comply with any applicable regulatory requirements or guidelines. Such stability testing shall include testing to validate the lead times for shipment, the shelf life of, and the product specifications applicable to shipment, storage and handling of the assay assembled and packed by the client.*