October 2025

Saltonase® ELISA Kit Handbook

For the quantification of Saltonase content in cellular lysate or eluate from protein purification processes

Sample to Insight

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Kit Contents

Saltonase ELISA Kit Catalog number No. of reactions				EN32-001 5 × 96
Part	**Description**	**Format**	**Volume**	**Storage temperature (°C)**
	Box 1*			
Capture Plate	96-well strip microplate (12 strips of 8 wells)	5 plates	–	2–8
Detection A	Vial of biotin labeled antibody	1 vial	550 µL	2–8
Detection B	Vial of streptavidin conjugated to HRP	1 vial	550 µL	2–8
Dilution Buffer	25 mL per bottle diluent (including preservative) used to dilute the protein standard and detection reagents A/B	2 bottles	25 mL	2–8
20x Wash Buffer Concentrate†	25 mL per bottle of a 20-fold concentrated solution of buffered surfactant	1 bottle	110 mL	2–8
Color Reagent	50 mL per bottle of TMB (tetramethylbenzidine)	1 bottle	50 mL	2–8
Stop Solution	25 mL per bottle	1 bottle	25 mL	2–8
Plate Sealer	Adhesive strips	20 strips	–	2–8
	Box 2§			
Saltonase standard	Vial of Saltonase MBG (100 µg/mL)	1 vial	1 mL	–30 to –15

* Shipped at 4°C.

† Dilute 1:20 with deionized water before use.

§ Shipped at –20°C.

Shipping and Storage

Saltonase ELISA Kit is shipped in 2 boxes. When you receive the kit, promptly store reagents at the indicated temperatures.

- Box 1 is shipped at 4°C under controlled temperature conditions. Upon receipt, all components in Box 1 should be stored at 2–8°C.
- Box 2 is shipped at –20°C. Upon receipt, the vial containing Saltonase MBG in Box 2 should be stored at –30°C to –15°C.

Under these conditions, the components are stable until the expiration date. The expiration date for the product is provided on the label and will vary based on the date of manufacture of the kit.

Intended Use

Saltonase ELISA Kit is intended for molecular biology applications. This product is not intended for the diagnosis, prevention, or treatment of a disease.

All due care and attention should be exercised in the handling of the products. We recommend all users of QIAGEN® products to adhere to the NIH guidelines that have been developed for recombinant DNA experiments, or to other applicable guidelines.

Safety Information

When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. For more information, please consult the appropriate safety data sheets (SDSs). These are available online in convenient and compact PDF format at **www.qiagen.com/safety**, where you can find, view, and print the SDS for each QIAGEN kit and kit component.

Enzyme Stop Solution is an acidic solution that may cause severe skin burns and eye damage. Wear eyes, hands, face, and clothing protection when using this material.

Saltonase Detection Antibody A, Dilution Buffer, and Conjugate Detection Antibody B may cause allergic reaction. Wear eyes, hands, face, and clothing protection when handling these materials.

Detection A and Dilution Buffer can cause an immediate skin, eye, or respiratory tract irritant. Use protective gloves, protective clothing, eyes protection, and face protection.

Enzyme Substrate Solution (Color Reagent) can cause skin and eye irritation, and is suspected of causing cancer. Wear eyes, hands, face, and clothing protection when using this material.

Quality Control

In accordance with QIAGEN's ISO-certified Quality Management System, each lot of Saltonase ELISA Kit is tested against predetermined specifications to ensure consistent product quality. Saltonase ELISA Kit meets ISO 13485 requirements.

Introduction

Saltonase ELISA Kit (5 x 96) is for the quantification of Saltonase content in cellular lysate or eluate from protein purification processes.

Principle of the assay

This assay employs the quantitative sandwich enzyme immunoassay technique. An antibody specific for Saltonase has been pre-coated onto a microplate. Standards or samples are pipetteted into the wells and any Saltonase present is bound by the immobilized antibody. After washing away any unbound reagent, a biotin-labeled Saltonase antibody (Detection A) is added to the wells. After washing away any unbound reagent, Streptavidin-Poly-HRP (Detection B) is added to the wells. Following a wash to remove any unbound reagent, a substrate solution is added to the wells and color develops in proportion to the amount of Saltonase bound in the initial step. The color development is stopped and the intensity of the color is measured using a plate reader.

Equipment and Reagents to Be Supplied by User

When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. For more information, consult the appropriate safety data sheets (SDSs) available from the product supplier.

Make sure that you have the following user-supplied consumables and equipment before starting the protocol. These items supplement the components provided in the kit.

- Microplate reader capable of measuring absorbance at 450 nm, with the correction wavelength set at 630 nm or 620 nm
- Pipettes and pipette tips
- Deionized or distilled water
- 500 mL graduated cylinder
- Squirt bottle, multichannel pipette, or automated microplate washer
- Test tubes for dilution of standards

Important Notes

Preparing reagents

Equilibrate all reagents to room temperature (15–25°C) before use.

20-fold Wash Buffer Concentrate

If crystals have formed in the concentrate, warm to room temperature and mix gently until the crystals have completely dissolved. Add 25 mL of Wash Buffer Concentrate to 475 mL of deionized or distilled water to prepare 500 mL of diluted Wash Buffer.

Detection A/B

Shake and mix before use, then briefly centrifuge to ensure the whole volume is at the bottom of the tube. Dilute the Detection A and B reagents 1:100 to the working concentration with Dilution Buffer.

Preparing the standard

Thaw the Saltonase standard (100 µg/mL) at room temperature and dilute stepwise with the provided Dilution Buffer to reach a final concentration of 100 ng/mL. For example:

1. 20 µL Saltonase standard + 380 µL Dilution Buffer (1:20 dilution)
2. 20 µL of step 1 dilution + 380 µL Dilution Buffer (1:20 dilution)
3. 100 µL of step 2 dilution + 150 µL dilution buffer (1:2.5 dilution). Using the diluted standard (ST), prepare the standard curve by serial dilutions according to Table 1 on the facing page. Dilution Buffer is used to perform the serial dilutions. The resulting concentration of Saltonase in each sample is indicated in the following table.

Table 1. Serial dilution of the standard

Sample	Preparation	Concentration (ng/mL)
A	16 µL diluted standard (ST) + 784 µL buffer	2
B	400 µL sample A + 400 µL buffer	1
C	400 µL sample B + 400 µL buffer	0.5
D	400 µL sample C + 400 µL buffer	0.25
E	400 µL sample D + 400 µL buffer	0.125
F	400 µL sample E + 400 µL buffer	0.0625
G	400 µL sample F + 400 µL buffer	0.03125
H (blank)	800 µL buffer	0

Preparing the sample

It is recommended to dilute the sample in the provided Dilution Buffer to limit the influence of the sample matrix on the measurement. The tested assay range is from 31.25 pg/mL to 2000 pg/mL.

Protocol

Important points before starting

- Equilibrate all reagents and samples to room temperature (15–25°C) before use.
- It is recommended that all standards and samples be assayed in at least duplicates.
- It is recommended that the required reagents and working standard are prepared immediately before use following the procedure described in the previous sections.

Assay procedure

1. Remove excess microplate strips from the plate frame, return them to the foil pouch containing the desiccant pack, and reseal.
2. Add 100 µL standard or samples to each well. Cover with the adhesive strip provided. Incubate for 1 h at room temperature without shaking.
3. Aspirate each well and wash, repeating the process 3 times. Wash by filling each well with Wash Buffer (300 µL) using a squirt bottle, manifold dispenser, or auto-washer. Leave the wash solution in contact with the well for 30 s per wash.

   Note: Complete removal of liquid at each step is essential for good assay performance.

   After the last wash, remove any remaining Wash Buffer by aspirating or decanting. Invert the plate and blot it against clean paper towels.
4. Add 100 µL of Detection A (working solution) to each well. Cover with a new adhesive strip. Incubate for 1 h at room temperature without shaking.
5. Repeat the aspiration/wash in step 3.

6. Add 100 µL of Detection B (working solution) to each well. Cover with a new adhesive strip. Incubate for 30 min at room temperature without shaking.
7. Repeat the aspiration/wash in step 3.
8. Add 100 µL of Color Reagent to each well. Incubate for 10 min at room temperature. Protect from light.
9. Add 50 µL of Stop Solution to each well. The color in the wells should change from blue to yellow. If the color in the wells is green or the color changes do not appear uniform, gently tap the plate to ensure thorough mixing.
10. Determine the optical density of each well within 10 min using a microplate reader set to 450 nm.

    If wavelength correction is available, set it to 630 nm or 620 nm.

    If wavelength correction is not available, subtract readings at 630 nm or 620 nm from the readings at 450 nm. This subtraction will correct for optical imperfections in the plate. Readings made directly at 450 nm without correction may be higher and less accurate.

Calculation of results

Average the replicate readings for each standard and sample. Construct a standard curve by plotting the mean absorbance for each standard on the Y-axis against the concentration on the X-axis and draw a best fit curve through the points on the graph.

If samples have been diluted, the concentration read from the standard curve must be multiplied by the dilution factor.

To achieve the maximum accuracy, it is recommended to perform the measurements of the standard curve and the samples in triplicates.

Troubleshooting Guide

This troubleshooting guide may be helpful in solving any problems that may arise. For more information, visit **www.qiagen.com/FAQ/FAQList.aspx** for Frequently Asked Questions at our Technical Support Center (for contact information, visit **www.qiagen.com**).

	Comments and suggestions
Poor precision	
a) Wells are not washed or aspirated properly	Make sure that the wash apparatus works properly, and that the protocol is followed.
b) Bubbles in the wells	Gently tap the plate to disperse bubbles.
c) Wells are scratched with pipette tip or washing needles	Dispense and aspirate solution into and out of wells with caution.
d) Particulate matter found in the samples	Remove any particulate matter by centrifugation prior to working on the assay.
High background	
a) Plate is not washed properly	Make sure that the wash apparatus works properly, and that the protocol is followed.
b) Incorrect incubation times and/or temperatures	The OD value increases gradually over time. Reduce the color development time.
Weak or no signal	
a) pipetteting errors	Make sure that the pipette is calibrated.
b) The working solution was not prepared immediately before use	The working solution should be prepared immediately before use and should not be stored.
c) Volumetric errors	Repeat assay with the volumes stated in this handbook.
d) The plate is not incubated for the proper time or temperature	Follow this handbook to repeat processing the assay.

Ordering Information

Product	Contents	Cat. no.
Saltonase ELISA Kit (5 x 96)	60 pre-coated 8-well strips, providing a total of 480 measurements	EN32-001
Related products		
Saltonase MBG	Saltonase MBG at ≥250 U/µL	EN32-050, EN32-250, EN32-B
Saltonase GMP-grade	Saltonase GMP-grade at ≥250 U/µL	EN32-B10, EN32-B50

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at **www.qiagen.com** or can be requested from QIAGEN Technical Services or your local distributor.

Document Revision History

Date	Description
10/2025	Initial release

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