

## XF Glycolysis Stress Test with MCF7 Cells

**ASSAY OVERVIEW:** General guidelines for performing the **XF Glycolysis Stress Test** assay with MCF7 cells. This **Assay Guide** is for use on either XF<sup>e</sup>96, XF96, or XFp Analyzers<sup>†</sup>.

- This guide is associated with the **XF<sup>e</sup>96** Assay Template: **MCF7-GLYCO-96** (.asyt file).
- This assay may be adapted for acute injections (compounds). Assign the acute injection to Port A, and reassign the injections of glucose, oligomycin and 2-deoxyglucose to Ports B, C and D, respectively.
- Cells are to be plated at the indicated density 1 day(s) prior to the assay.
- The compound concentrations listed are *final* concentrations in well.
- Sample data is provided below. Absolute rates and magnitude of responses may vary based on biological and experimental variables.

**Please note:** Further optimization may be required depending on parameters tested and variables modified.

**INJECTION STRATEGY:** XF Glycolysis Stress Test  
(Final concentration in well)

- Port A: 10 mM glucose
- Port B: 1.0  $\mu$ M oligomycin
- Port C: 50 mM 2-deoxyglucose (2-DG)
- Port D: N/A

### PRETREATMENTS:

- Control Group(s)
- Experimental Group(s)

**ASSAY MEDIA:** Glyco Stress Test Assay Medium

- XF Base Media: Supplement with 2 mM glutamine, pH 7.4.
- Initial Assay Volume: 180-200  $\mu$ L

### CELL SEEDING DENSITY

- MCF7 cells
- $2.0 \times 10^4$  cells/well, plated 1 day prior to assay.

### INSTRUMENT PROTOCOL:

- Calibrate
- Equilibrate
- Basal: 3 cycles  
- 3 min *Mix*, 0 min *Wait*, 3 min *Measure*
- Inject Port A followed by 3 cycles  
- 3 min *Mix*, 0 min *Wait*, 3 min *Measure*
- Inject Port B followed by 3 cycles  
- 3 min *Mix*, 0 min *Wait*, 3 min *Measure*
- Inject Port C followed by 3 cycles  
- 3 min *Mix*, 0 min *Wait*, 3 min *Measure*

### XFp ANALYZER:

- All assay parameters (assay volumes, cell seeding density and all concentrations of media components and XF Cell Mito Stress Test compounds) remain unchanged.
- Groups are limited to 2 per plate (3 wells per group).

### TYPICAL ASSAY DATA RESULTS FOR XF<sup>e</sup>96, XF96, and XFp Analyzers (Prior to normalization)

Expected range of initial rate 11-17 mpH/min	Glucose response of initial rate* 385%	Oligomycin response of initial rate* 615%	2-Deoxyglucose response of initial rate* 120%
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*\*The indicated values represent a percentage of the initial rate and may vary +/-20%*

<sup>†</sup> For XF<sup>e</sup>24 and XF24 Analyzers, refer to **Assay Tech Hints: Modifying XF<sup>e</sup>96 Parameters for XF<sup>e</sup>24 and XF24 Analyzers**