

# Getting Started with G-Rex<sup>®</sup> Plates

## Introduction

G-Rex Plates are unique multi-well plates which have a gas exchange membrane at the base of each deep well. Suspension cells will settle on this gas exchange membrane which permits efficient oxygenation to allow continuous exponential cell expansion over a long period of incubation. Cell passaging is therefore not required. The growth of the cells is limited by the media type, volume and state of depletion of the media.

|          | Volume per well | Area of base membrane | Minimum cells to inoculate |
|----------|-----------------|-----------------------|----------------------------|
| G-Rex 6  | 35 ml           | 10 cm <sup>2</sup>    | 1.25e6                     |
| G-Rex 24 | 7 ml            | 2 cm <sup>2</sup>     | 2.5e4                      |

Over a period of 10 days with one re-feeding it should be possible, with many types of suspension cells, to expand cell numbers between 40 to 100 times the original number seeded.

The maximum cells/cm<sup>2</sup> that can be supported by this gas exchange technology is between 10 and 30 million cells/cm<sup>2</sup> of base membrane.

## Compare clones for cell secretion and characterisation of their secreted products

G-Rex Plates can be used as a convenient way to quickly grow up different clones for comparisons of production rates and product characteristics.

## Removing media and recovering cells

Cells will remain on the gas exchange membrane during medium removal if the aspirating pipette tip is kept close to the meniscus and is not allowed to get close to the cells.

To recover cells, remove 75% of media, swirl to dislodge and suspend cells then recover this volume with the cells.

## Typical applications

- Conveniently generate small but useful amounts of monoclonal antibody from hybridoma clones
- Optimize conditions for efficient use of EZ-Flask (1 Litre reservoir, 200cm<sup>2</sup> gas exchange membrane)