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How to select the most suitable media for your cells

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Many different media are available to culture CHO cells. Most are either growth supporting or productivity supporting. Ideally, the basal medium is a growth supporting medium, while the feed medium is supporting both growth and productivity. In this study two clones producing the same mAb are compared on their response to a range of basal media. Clone I is fast-growing and low-producing, while Clone II is slower-growing, but high-producing. A panel of eleven different basal media from different vendors was evaluated for growth, titer and metabolism.

An overview is given on the response of the cells to the different media. From these data media supporting cell growth and media supporting mAb productivity can be identified. To conclude, an example of the added value of combining two media is shown. By combining media that support growth or support production an optimal (feed)media system can be designed.

Vendors have different philosophies when developing a medium, namely rich or lean basal media in combination with rich or lean feeds. Feed media can contain similar ingredients as their basal media or only a certain group of nutrients. Different types of CHO cells have different nutrient requirements and different clones from the same host may have different nutrients requirements. This makes choosing a medium a complex process. Which type of basal media to choose and is the connected feed medium the best choice to use as a feed? In this study we give our approach to the question: How to select the most suitable media for your cells?