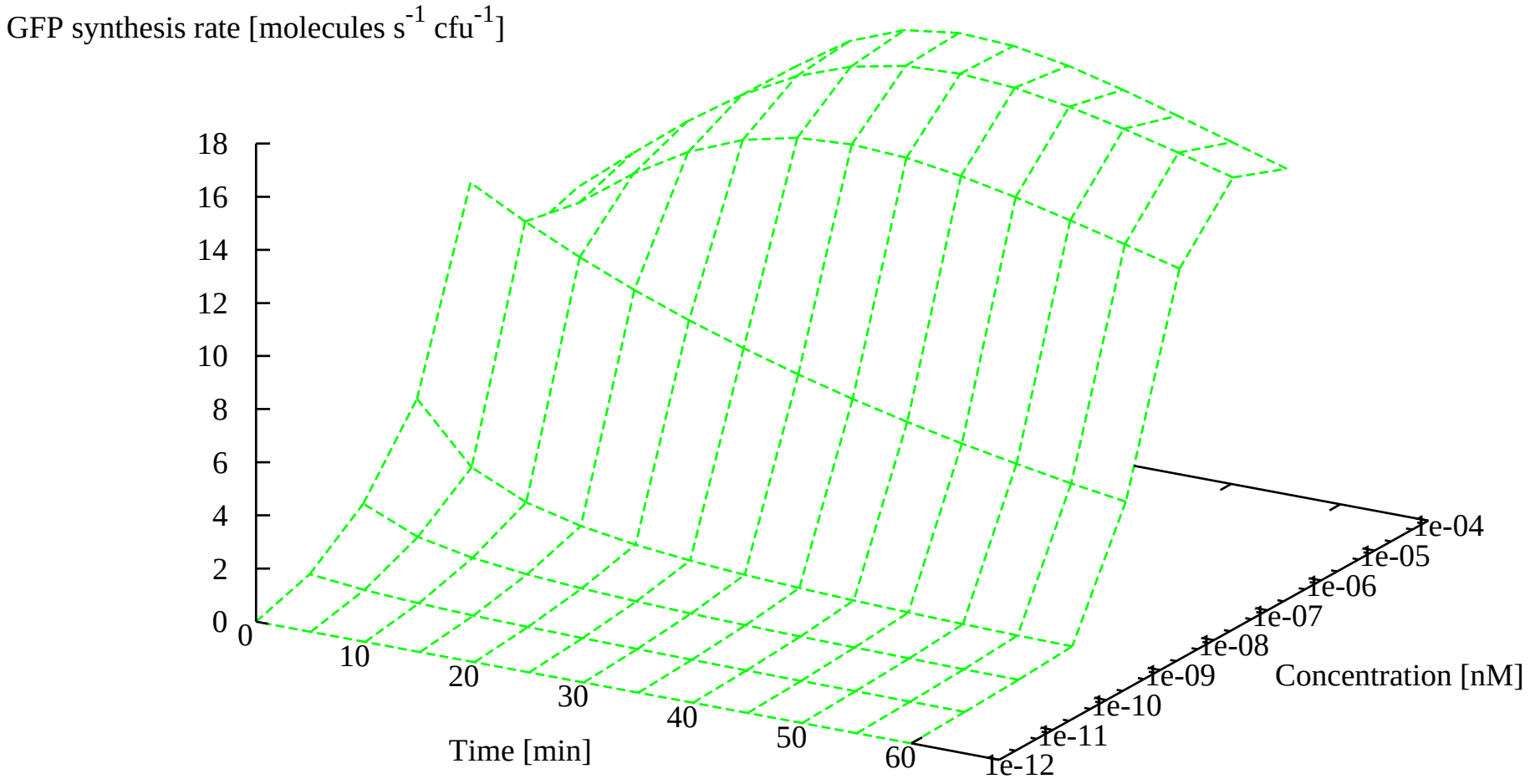cognate w/o carb