

# Off-Target Analysis Tool

## Introduction

The **CRISPR/Cas9** system has revolutionized gene editing in biologic systems and promises to bring amazing breakthroughs and advances in basic science, biotechnology and biomedical research. However, off-target interactions are a serious drawback to using the technology and pose considerable threat to the advancement of many applications.

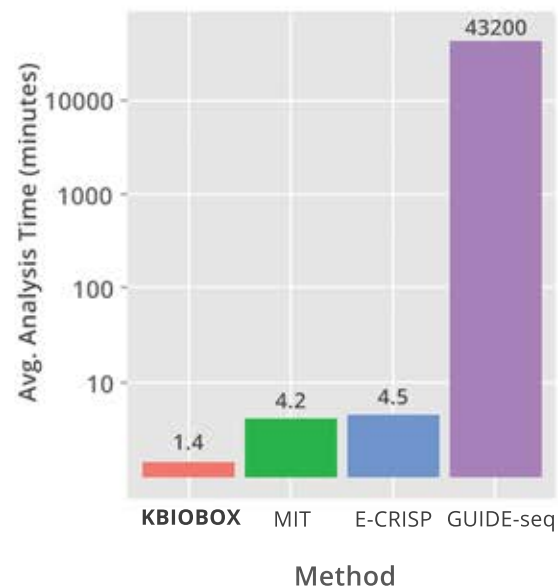
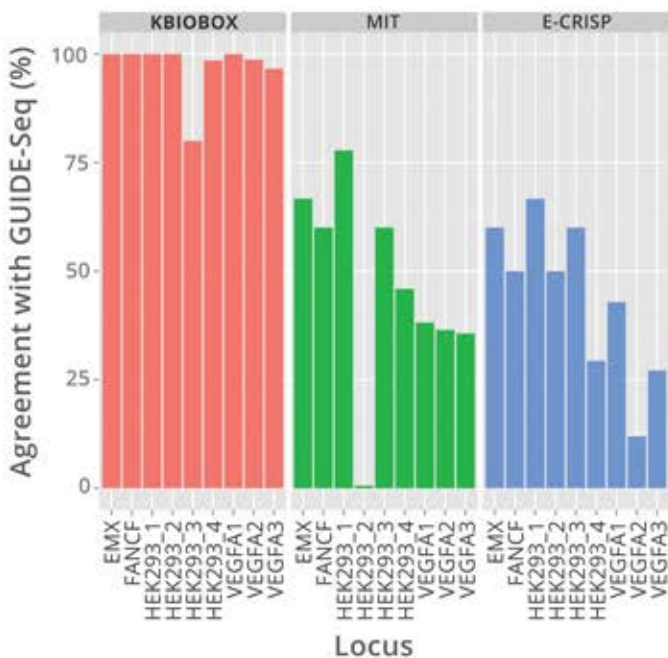
To determine off-target interactions, *Tsai et al.* recently introduced the **GUIDE-seq** method, which is now the field's gold standard. Multiple computational groups have since built off-target prediction tools based on GUIDE-Seq parameters. However, **until the creation of the KBioBox off-target analysis (OTA) tool, no prediction tool has yet proven to be consistently accurate.**

## Accurate Results

**KBioBox's OTA tool predicted 96.6% of the off-targets reported by the GUIDE-seq method.** By comparison, MIT's CRISPR design tool (<http://crispr.mit.edu>), and the E-CRISP tool (<http://www.e-crisp.org>) both found less than 50% of total off-targets reported by GUIDE-seq.

## Time Efficient Analysis

The KBioBox OTA tool provides accuracy and short run times. **KBioBox's OTA runs analysis in under two minutes.** Using the KBioBox Bio-Design tool in conjunction with the KBioBox OTA tool returns the "top ten" CRISPR designs, each with a complete whole genome off-target analysis in under three minutes.



For more information, please visit our website [www.KBioBox.com](http://www.KBioBox.com) or email us at [info@KBioBox.com](mailto:info@KBioBox.com)