

ABSTRACT**CRISPR-CAS12A BASED TARGET DETECTION**

5 Disclosed is a Cas12a protein or a Cas12a protein of the same clade comprising a maltose-binding protein (MBP) tag, and a CRISPR RNA (crRNA) for detecting Brucella. Also disclosed is a detection kit for Brucella comprising the crRNA as disclosed herein. Also disclosed is a method of detecting a nucleic acid of Brucella in a sample using the detection kit as disclosed herein. Further disclosed is a CRISPR-Cas12a composition
10 comprising the Cas12a protein as disclosed herein, and a crRNA comprising a direct repeat (DR) and a guide domain (protospacer), wherein the DR and the guide domain are connected in the 5' to 3' direction of the crRNA, and the crRNA is configured to target a nucleic acid of a predetermined target sequence and form a complex with the Cas12a protein as disclosed herein. Further disclosed is a method of detecting a nucleic acid
15 having a predetermined target sequence in a sample using the CRISPR-Cas12a composition as disclosed herein.

No suitable figure