

DESCRIPTION

Specificity	Detects TcBuster-M Transposase in Western blots.
Source	Recombinant Monoclonal Mouse IgG _{2B} Clone # 1077035
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Synthetic Peptide
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	HEK293T human embryonic kidney cell line mock electroporated or electroporated with 1 µg TcBuster-M Transposase after 1 day post-electroporation
Simple Western	20 µg/mL	HEK293T human embryonic kidney cell line mock electroporated or electroporated with 1 µg TcBuster-M Transposase after 1 day post-electroporation

DATA

Western Blot

Detection of TcBuster-M Transposase by Western Blot. Western Blot shows lysates of HEK293T human embryonic kidney cell line mock electroporated or electroporated with 1 µg TcBuster-M Transposase after 1 day post-electroporation. PVDF membrane was probed with 1 µg/ml of Mouse Anti-TcBuster-M Transposase Monoclonal Antibody (Catalog # MAB11511) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for TcBuster-M Transposase at approximately 70 kDa (as indicated). This experiment was conducted under reducing conditions and using Western Blot Buffer Group 1.

Simple Western

Detection of TcBuster-M Transposase by Simple Western™. Simple Western shows lysates HEK293T human embryonic kidney cell line mock electroporated or electroporated with 1 µg TcBuster-M Transposase after 1 day post-electroporation, loaded at 0.5 mg/ml. A specific band was detected for TcBuster-M Transposase at approximately 71 kDa (as indicated) using 20 µg/mL of Mouse Anti-TcBuster-M Transposase Monoclonal Antibody (Catalog # MAB11511). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS. For liquid material, refer to CoA for concentration.
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

TcBuster is a non-viral gene delivery system that enables stable gene transfer in most cell types. The TcBuster system belongs to the hAT-family of DNA transposons and is derived from the red flour beetle *Tribolium castaneum* (1). It consists of the TcBuster transposase mRNA and DNA transposon encoding multicistronic cargos for delivery. This antibody binds to the TcBuster-M transposase enzyme, a hyperactive version of TcBuster and carries out the cut-and-paste reactions for efficient delivery of DNA cargos (2). TcBuster is used in a wide variety of genome engineering applications for both research and commercial purposes. These include, but are not limited to, immune cell therapies (T, NK cells), stem cell therapies for regenerative medicine (iPSCs), and bioproduction of biologics, such as monoclonal antibodies. The TcBuster system is available for purchase from Bio-Techne. For more information, please visit <https://www.biotechne.com/services/gene-engineering-services-tcbuster>.

References:

1. Woodard, L.E. *et al.* (2012) PLOS One DOI: 10.1371/journal.pone.0042666.
2. Skeate, J.G. *et al.* (2024) Molecular Therapy DOI: 10.1016/j.ymthe.2024.04.024.