

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Pref-1 in direct ELISAs.
Source	Recombinant Monoclonal Rabbit IgG Clone # 1168B
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Pref-1/DLK1/FA1 Ala24-Gln305 Accession # Q09163
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	0.1 µg/mL	See Below
Flow Cytometry	0.25 µg/10 ⁶ cells	See Below
Immunohistochemistry	1-25 µg/mL	See Below
Simple Western	1 µg/mL	See Below

DATA

Western Blot

Detection of Mouse Pref-1/DLK1/FA1 by Western Blot. Western blot shows lysates of 3T3-L1 mouse embryonic fibroblast adipose-like cell line and mouse embryo tissue. PVDF membrane was probed with 0.1 µg/mL of Rabbit Anti-Mouse Pref-1/DLK1/FA1 Monoclonal Antibody (Catalog # MAB8634) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). A specific band was detected for Pref-1/DLK1/FA1 at approximately 45-50 kDa (as indicated). This experiment was conducted under reducing conditions and using *Immunoblot Buffer Group 1*.

Flow Cytometry

Detection of Pref-1/DLK1/FA1 in 3T3-L1 Mouse Cell Line by Flow Cytometry. 3T3-L1 mouse embryonic fibroblast adipose-like cell line was stained with Rabbit Anti-Mouse Pref-1/DLK1/FA1 Monoclonal Antibody (Catalog # MAB8634, filled histogram) or isotype control antibody (Catalog # AB-108-C, open histogram), followed by Allophycocyanin-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # F0111).

Immunohistochemistry

Pref-1/DLK1/FA1 in Mouse Embryonic Liver Tissue. Pref-1/DLK1/FA1 was detected in immersion fixed frozen sections of mouse embryonic liver tissue (13 d.p.c.) using Rabbit Anti-Mouse Pref-1/DLK1/FA1 Monoclonal Antibody (Catalog # MAB8634) at 1 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Rabbit IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC003). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to plasma membrane. View our protocol for *IHC Staining with VisUCyte HRP Polymer Detection Reagents*.

Simple Western

Detection of Mouse Pref-1/DLK1/FA1 by Simple Western™. Simple Western lane view shows lysates of mouse embryo tissue, loaded at 0.2 mg/mL. A specific band was detected for Pref-1/DLK1/FA1 at approximately 63 kDa (as indicated) using 1 µg/mL of Rabbit Anti-Mouse Pref-1/DLK1/FA1 Monoclonal Antibody (Catalog # MAB8634). 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.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
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

Pref-1 (Preadipocyte factor 1), also known as Protein delta homolog 1, DLK1, FA1 and Fetal antigen 1, is a 45-60 kDa transmembrane glycoprotein that is highly expressed in fetal liver, placenta, adult adrenal gland, brain, testis and ovary. Expression of Pref-1 is elevated in liver after birth but starts to decline around postnatal day 16. Mature mouse Pref-1 is a 362 amino acid (aa) type I transmembrane N- and O-linked glycoprotein. It contains a 282 aa extracellular region (aa 24-305), a 24 aa transmembrane segment (aa 306-329), and a 56 aa cytoplasmic domain (aa 330-385). It contains 6 EGF-like domains and is involved in embryonic skeletal system development. Pref-1 inhibits preadipocyte proliferation by regulating their entry into G1/S-phase and represses preadipocyte differentiation. It is a master regulator of preadipocyte homeostasis and adipose tissue expansion. Pref-1 manipulation may, therefore, be utilized in obesity treatments. Mouse Pref-1 shares 85% and 94% aa identity with human and rat Pref-1, respectively