

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human MESP-1 in direct ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 939826
Purification	Protein A or G purified from cell culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human MESP-1 Met1-Gln85 Accession # Q9BRJ9
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	2 µg/mL	See Below
Intracellular Staining by Flow Cytometry	0.25 µg/10 ⁶ cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA

Western Blot

Detection of Human MESP1 by Western Blot. Western blot shows lysates of Mouse ES cells transfected with human MESP1 untreated (-) or treated (+) with 100 ng/mL Doxycycline overnight. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human MESP1 Monoclonal Antibody (Catalog # MAB92193) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for MESP1 at approximately 45 kDa (as indicated). This experiment was conducted under reducing conditions and using *Immunoblot Buffer Group 3*.

Cells provided courtesy of Michael Kyba's lab, University of Minnesota.

Western Blot

Detection of Human MESP1 by Western Blot. Western blot shows lysates of H1 human embryonic stem cells untreated (-) or treated (+) with 100 ng/mL Doxycycline overnight. PVDF membrane was probed with Mouse Anti-Human MESP1 Monoclonal Antibody (Catalog # MAB92193) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for MESP1 at approximately 30 kDa (as indicated).

Image provided courtesy of Michael Kyba's lab, University of Minnesota.

Intracellular Staining by Flow Cytometry

Detection of MESP1 in Mouse ES cells transfected with human MESP1 by Flow Cytometry. Mouse ES cells transfected with human MESP1 were stained with Mouse Anti-Human MESP1 Monoclonal Antibody (Catalog # MAB92193, filled histogram) or isotype control antibody (Catalog # MAB002, open histogram), followed by APC-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). To facilitate intracellular staining, cells were fixed and permeabilized with FlowX FoxP3 Fixation & Permeabilization Buffer Kit (Catalog # FC012). View our protocol for *Staining Intracellular Molecules*.

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

Mesoderm posterior protein 1 (Mesp-1) is a 268 amino acids protein that in humans is encoded by the MESP1 gene. Mesp-1 was first identified in transcripts enriched in the posterior region of the mouse embryo at embryonic day E7 to E7.5. Lineage tracing in mice showed that Mesp-1 represents the earliest marker of cardiac progenitors and directs multipotential cardiovascular cell fates, patterning mesoderm into cardiac, hematopoietic, or skeletal myogenic progenitors in a context-dependent manner.