

DESCRIPTION

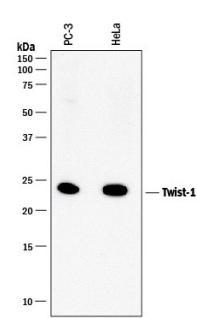
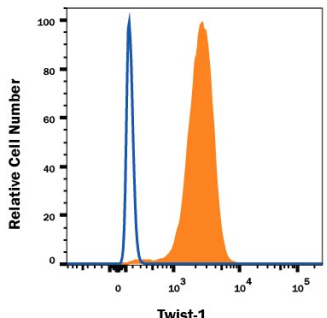
Species Reactivity	Human
Specificity	Detects human Twist-1 in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG ₁ Clone # 927403
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Twist-1 Met1-His202 Accession # Q15672
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
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

<p>Western Blot</p>  <p>Detection of Human Twist-1 by Western Blot. Western blot shows lysates of PC-3 human prostate cancer cell line and HeLa human cervical epithelial carcinoma cell line. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human Twist-1 Monoclonal Antibody (Catalog # MAB6230) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for Twist-1 at approximately 24 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p>Flow Cytometry</p>  <p>Detection of Twist-1 in Human PBMCs by Flow Cytometry. Human peripheral blood mononuclear cell (PBMCs) were stained with Mouse Anti-Human Twist-1 Monoclonal Antibody (Catalog # MAB6230, filled histogram) or isotype control antibody (Catalog # MAB002, open histogram), followed by Phycoerythrin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0102B). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005). View our protocol for Staining Intracellular Molecules.</p>
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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

Twist-1 (Twist-related protein 1; also H-Twist and bHLHa38) is a 25-27 kDa class B member of the bHLH transcription factor family of proteins. It is widely expressed in embryo, and select adult cells such as white adipocytes. In fat, Twist-1 induces fatty acid oxidation via PGC-1α and CPT-1, and promotes MCP-1 and TNF-α secretion by adipocytes. In epithelium, Twist-1 dysregulation represses E-Cadherin and induces N-Cadherin expression, resulting in an epithelial-to-mesenchymal transition that can lead to cancer. Human Twist-1 is 202 amino acids (aa) in length. It contains a bHLH domain (aa 109-164) with an embedded DNA-binding motif. Twist-1 forms homodimers, and heterodimerizes with TCF3, HAND 1 and HAND 2. Two distinct mutations exist that may impact its dimerization pattern. There is one seven aa insertion after Ile135, and a second seven aa insertion after Pro139. A third unrelated variant shows a four Gly insert after Gly92. Full-length human Twist-1 shares 98% aa identity with mouse Twist-1.