

DESCRIPTION

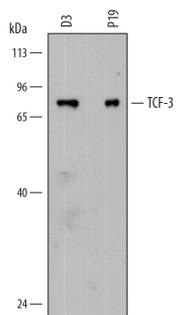
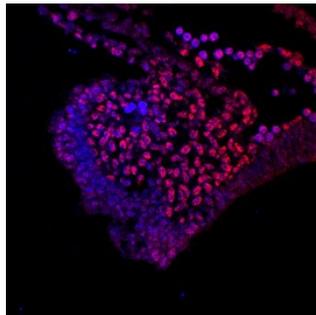
Species Reactivity	Mouse
Specificity	Detects mouse TCF-3/E2A in ELISAs. In direct ELISAs, no cross-reactivity with recombinant human TCF-3 is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 826927
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant mouse TCF-3/E2A Asn33-Arg159 Accession # P15806
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
Immunohistochemistry	8-25 µg/mL	See Below

DATA

<p>Western Blot</p>  <p>Detection of Mouse TCF-3/E2A by Western Blot. Western blot shows lysates of D3 mouse embryonic stem cell line and P19 mouse embryonal carcinoma cell line. PVDF membrane was probed with 2 µg/mL of Rat Anti-Mouse TCF-3/E2A Monoclonal Antibody (Catalog # MAB7650) followed by HRP-conjugated Anti-Rat IgG Secondary Antibody (Catalog # HAF005). A specific band was detected for TCF-3/E2A at approximately 75 kDa (as indicated). This experiment was conducted under reducing conditions and using <i>Immunoblot Buffer Group 1</i>.</p>	<p>Immunohistochemistry</p>  <p>TCF-3/E2A in Mouse Embryo. TCF-3/E2A was detected in immersion fixed frozen sections of E9.5 mouse embryo using Rat Anti-Mouse TCF-3/E2A Monoclonal Antibody (Catalog # MAB7650) at 10 µg/mL overnight at 4 °C. Tissue was stained using the NorthernLights™ 557-conjugated Anti-Rat IgG Secondary Antibody (red; Catalog # NL013) and counterstained with DAPI (blue). Specific staining was localized to branchial arch nuclei. View our protocol for Fluorescent IHC Staining of Frozen Tissue Sections.</p>
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PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
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

TCF-3 (Transcription factor 3; also Transcription factor A1 and E2A/alpha plus E12/E47) is a 68-75 kDa nuclear class I member of the bHLH family of molecules. It should not be confused with TCF-3, otherwise known as TCF7-L1, an epidermis-associated β-catenin regulator. TCF-3 is ubiquitously expressed, and generally serves as a transcriptional regulator. It is able to form covalent homodimers, and following phosphorylation, heterodimers with tissue-specific class II bHLH factors, thus impacting the proliferation and differentiation of select cell types. While heterodimers, and possibly homodimers, activate genes by binding to E boxes, heterodimers involving Id proteins are gene repressors. Mouse TCF-3/E12 is 651 amino acids (aa) in length. It contains one Leu-zipper motif (aa 387-422) plus a bHLH domain (aa 544-604). TCF-3 contains at least three potential Ser phosphorylation sites. There is one alternative splice form that is termed E47 and shows a 69 aa substitution for aa 527-598. This involves the bHLH domain, and it is believed that each splice form has a distinct function(s). Both splice forms (E12 and E47) do occur simultaneously in the same cell type. Over aa 33-159, mouse TCF-3 shares 94% and 75% aa sequence identity with rat and human TCF-3, respectively.