

DESCRIPTION

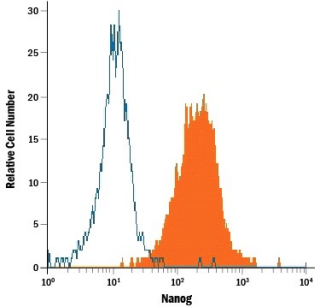
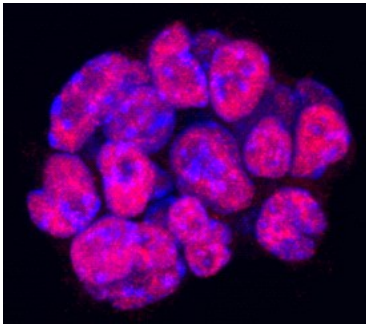
Species Reactivity	Mouse
Specificity	Detects recombinant mouse Nanog in Western blots. In this format, approximately 50% cross-reactivity with recombinant human Nanog is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant mouse Nanog Trp154-Leu262 Accession # Q80Z64
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
Immunocytochemistry	5-15 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.	
Western Blot	Yang, W. <i>et al.</i> (2014) Nat. Comm. 5:3818	

DATA

<p>Intracellular Staining by Flow Cytometry</p>  <p>Detection of Nanog in D3 Mouse Cell Line by Flow Cytometry. D3 mouse embryonic stem cell line was stained with Goat Anti-Mouse Nanog Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2729, filled histogram) or isotype control antibody (Catalog # AB-108-C, open histogram), followed by Allophycocyanin-conjugated Anti-Goat IgG Secondary Antibody (Catalog # F0108). 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).</p>	<p>Immunocytochemistry</p>  <p>Nanog in D3 Mouse Cell Line. Nanog was detected in immersion fixed D3 mouse embryonic stem cell line using Goat Anti-Mouse Nanog Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2729) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to nuclei. View our protocol for Fluorescent ICC Staining of Stem Cells on Coverslips.</p>
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PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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

Nanog is a member of the homeobox family of DNA binding transcription factors that has been shown to maintain pluripotency of embryonic stem cells. Its expression is high in undifferentiated embryonic stem cells and is down-regulated during embryonic stem cell differentiation, concomitant with loss of pluripotency (1-3).

References:

1. Mitsui, K. *et al.* (2003) Cell 11:631.
2. Chambers, I. *et al.* (2003) Cell 113:643.
3. Hart, A.H. *et al.* (2004) Dev. Dyn. 230:187.