

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human NKX3.1 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) NKX2.2, rhNKX6.1, and rhBAP31 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human NKX3.1 Met1-Pro123 Accession # Q99801
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.

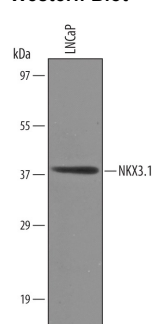
APPLICATIONS

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
Immunocytochemistry	5-15 µg/mL	See Below

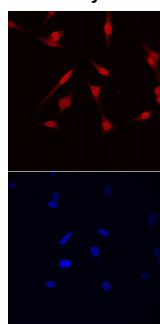
DATA

Western Blot



Detection of Human NKX3.1 by Western Blot. Western blot shows lysates of LNCaP human prostate cancer cell line. PVDF Membrane was probed with 0.1 µg/mL of Goat Anti-Human NKX3.1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6080) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for NKX3.1 at approximately 38 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

Immunocytochemistry



NKX3.1 in LNCaP Human Cell Line. NKX3.1 was detected in immersion fixed LNCaP human prostate cancer cell line using Goat Anti-Human NKX3.1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6080) 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 Cells on Coverslips](#).

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

NKX3.1 (Homeobox protein NK-3 homolog A) is a 32-38 kDa member of the NK-3 homeobox family of transcription factors. It is expressed in testis and prostatic epithelium, and appears to be regulated by both testosterone and estrogen (but not progesterone). NKX3.1 apparently promotes prostate gland development, and acts as a tumor suppressor/transcriptional repressor by interacting with HDAC-1 and increasing p53 acetylation and half-life. Human NKX3.1 is 234 amino acids (aa) in length. It contains a DNA binding homeodomain (aa 124-183) and phosphorylation sites at Ser185 and Ser196 that regulate protein turnover. There are four splice variants that show changes N-terminal to the homeobox domain. Deletions of aa 8-56, 13-87, 15-83 and 40-83 are all reported. Over aa 1-123, human NKX3.1 shares 50% aa identity with mouse NKX3.1.