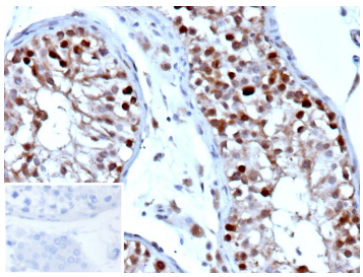
NANOG Transcription Factor Antibody / Nanog [clone NANOG/9704] (V6024)

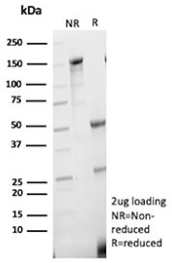
Catalog No.	Formulation	Size
V6024-100UG	0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6024-20UG	0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug
V6024SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, lambda
Clone Name	NANOG/9704
UniProt	Q9H9S0
Localization	Nucleus
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This NANOG Transcription Factor/Nanog antibody is available for research use only.



Immunohistochemistry analysis of NANOG Transcription Factor/Nanog antibody (clone NANOG/9704) in human testis tissue. Formalin-fixed, paraffin-embedded human testis demonstrates predominant nuclear HRP-DAB brown staining in subsets of germ cells within seminiferous tubules, consistent with NANOG expression, while surrounding stromal cells show minimal staining. Nuclear counterstain highlights tissue architecture. The inset shows PBS used in place of primary antibody as a negative control, confirming absence of specific staining. Heat-induced epitope retrieval was performed by heating tissue sections in 10 mM Tris with 1 mM EDTA, pH 9.0, for 45 minutes at 95oC followed by cooling at room temperature for 20 minutes prior to staining.



SDS-PAGE Analysis of Purified NANOG Transcription Factor/Nanog antibody (NANOG/9704). Confirmation of Purity and Integrity of Antibody.

Description

NANOG Transcription Factor antibody, also known as Nanog antibody, recognizes Nanog homeobox, a nuclear transcription factor encoded by the NANOG gene that plays a central role in pluripotency regulation and cellular plasticity. NANOG is a homeodomain-containing protein that binds specific DNA sequences to regulate gene expression programs required for maintenance of an undifferentiated state. As a key member of the core pluripotency network, NANOG functions alongside OCT4 and SOX2 to sustain embryonic stem cell identity and suppress differentiation pathways. NANOG Transcription Factor antibody is widely used in stem cell biology and developmental research to evaluate pluripotent cell populations and transcriptional regulation mechanisms.

NANOG expression is tightly controlled during early embryogenesis, becoming restricted to the inner cell mass of the blastocyst and later to epiblast cells. By activating genes associated with self-renewal and repressing lineage-specific transcriptional programs, NANOG helps maintain the balance between proliferation and differentiation. Its activity involves recruitment of chromatin-modifying complexes and interaction with other transcriptional regulators, enabling dynamic control of stem cell gene networks. Because of this central regulatory function, NANOG Transcription Factor antibody supports investigation of reprogramming efficiency, induced pluripotent stem cell generation, and developmental lineage commitment.

Beyond embryonic development, aberrant NANOG expression has been reported in multiple malignancies, where it has been associated with tumor-initiating capacity, therapeutic resistance, and stem-like phenotypes. In cancer research, NANOG Transcription Factor antibody is used to evaluate nuclear expression patterns and to study transcriptional programs linked to tumor progression and cellular dedifferentiation. NANOG protein localizes predominantly to the nucleus, consistent with its role as a transcriptional regulator, although cytoplasmic staining may also be observed depending on cell context and experimental conditions. Clone NANOG/9704 is designed to detect NANOG in research applications and enables investigation of pluripotency-associated signaling pathways and transcriptional regulation.

Application Notes

Optimal dilution of the NANOG Transcription Factor/Nanog antibody should be determined by the researcher.

Immunogen

A recombinant fragment (around amino acids 100-250) of human NANOG protein (exact sequence is proprietary) was used as the immunogen for the NANOG Transcription Factor/Nanog antibody.

Storage

NANOG Transcription Factor/Nanog antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.