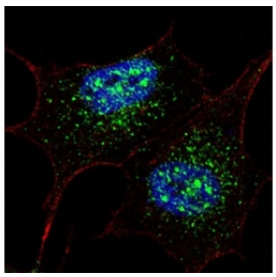
NANOG Antibody / Nanog homeobox (F44249)

Catalog No.	Formulation	Size
F44249-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F44249-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

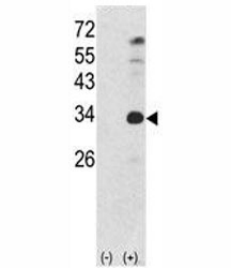
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	Q9H9S0
Applications	Western blot: 1:1000 Immunofluorescence: 1:10-1:50
Limitations	This NANOG antibody is available for research use only.



Immunofluorescence analysis of NANOG / Nanog homeobox antibody in human SH-SY5Y cells. Cells stained with NANOG antibody (green) demonstrate predominant nuclear fluorescence with additional cytoplasmic signal. Nuclei are counterstained with DAPI (blue). The staining pattern is consistent with NANOG localization primarily in the nucleus with detectable cytoplasmic distribution under the conditions tested.



Western blot analysis of NANOG antibody and HepG2 lysate. Predicted molecular weight: 35-45 kDa.



Western blot analysis of NANOG antibody and 293 cell lysate (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the human gene (2). Predicted molecular weight: 35-45 kDa.

Description

NANOG antibody, also known as Nanog homeobox antibody, recognizes Nanog homeobox, a nuclear transcription factor encoded by the NANOG gene that is essential for early embryonic lineage specification. NANOG is a homeodomain-containing protein that binds DNA and regulates transcriptional programs controlling cell fate decisions during pre-implantation development. Rather than acting alone, NANOG functions within a tightly regulated transcriptional network that coordinates the balance between pluripotency and differentiation. NANOG antibody is commonly used to evaluate developmental stage-specific expression patterns and to investigate mechanisms governing early embryogenesis.

During blastocyst formation, NANOG expression becomes restricted to the inner cell mass, where it contributes to establishment of the epiblast lineage. Through selective activation and repression of downstream target genes, NANOG supports expansion of pluripotent progenitor cells while suppressing differentiation toward extraembryonic lineages. Its regulatory activity involves interaction with chromatin-modifying complexes and other transcription factors, enabling dynamic control of gene expression during early development. Because of this tightly controlled expression pattern, NANOG antibody provides a useful tool for studying developmental timing, lineage segregation, and transcriptional reprogramming events.

In addition to its developmental role, aberrant NANOG expression has been described in various malignancies, where it has been linked to stem cell-like phenotypes, tumor heterogeneity, and resistance to cytotoxic therapies. Elevated NANOG levels in cancer cells are often associated with enhanced proliferative capacity and altered differentiation status. NANOG protein localizes predominantly to the nucleus, consistent with its function as a transcriptional regulator. Detection of NANOG expression using NANOG antibody supports investigation of embryonic development, cellular plasticity, and tumor-associated stemness pathways in diverse experimental systems.

Application Notes

Titration of the NANOG antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 267-292 from the human protein was used as the immunogen for this NANOG antibody.

Storage

Aliquot the NANOG antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

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