Homeobox protein NANOG (Cancer Stem Cell Marker) Antibody

Mouse Monoclonal Antibody [Clone NANOG/9704]

Catalog No	Format	Size
79923-MSM3-P0	Purified Ab with BSA and Azide at 200ug/ml	20 ug
79923-MSM3-P1	Purified Ab with BSA and Azide at 200ug/ml	100 ug
79923-MSM3-P1ABX	Purified Ab WITHOUT BSA and Azide at 1.0mg/ml	100 ug

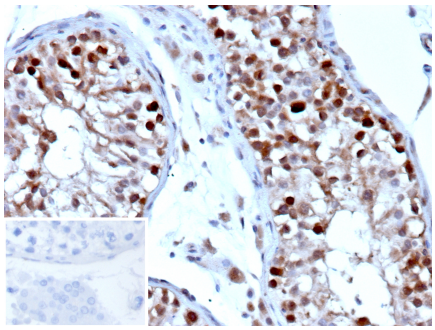
Applications	Tested Dillution	Note
Immunohistochemistry (IHC)	1-2ug/ml	30 min at RT. Staining of formalin-fixed tissues requires heating tissue sections in 10mM Tris with 1mM EDTA, pH 9.0, for 45 min at 95°C followed by cooling at RT for 20 minutes

Product Details

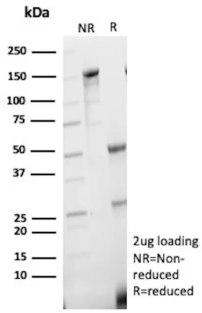
Clone	NANOG/9704
Gene Name	NANOG
Immunogen	Recombinant fragment (around aa100-250) of human NANOG protein (exact sequence is proprietary)
Host	Mouse
Clonality	Monoclonal
Isotype / Light Chain	IgG2b / Lambda
Mol. Weight of Antigen	40kDa
Cellular Localization	Nucleus
Species Reactivity	Human
Positive Control	Human testicular carcinoma.

**Optimal dilution for a specific application should be determined.*

Product Images for Homeobox protein NANOG (Cancer Stem Cell Marker) Antibody



Formalin-fixed, paraffin-embedded human testis stained with NANOG Mouse Monoclonal Antibody (NANOG/9704). Inset: PBS instead of primary antibody; secondary only negative control.



SDS-PAGE Analysis of Purified NANOG Mouse Monoclonal Antibody (NANOG/9704). Confirmation of Purity and Integrity of Antibody.

Specificity & Comments

The homeobox protein Nanog is a transcription factor crucial for maintaining the pluripotency of embryonic stem cells (ESCs) by inhibiting cell differentiation factors. In humans, the NANOG gene encodes this protein. Nanog operates alongside other factors such as Oct-4 and SOX2 to define ESC identity. It is also highly expressed in cancer stem cells, suggesting a potential role as an oncogene in promoting cancer development. Elevated levels of Nanog are linked to poor prognosis in cancer patients. Nanog shows strong and specific expression in carcinoma in situ (CIS), embryonal carcinomas, and seminomas but are absent in teratomas and yolk sac tumors. Research indicates that human embryonic stem cell-related genes, including OCT4, NANOG, STELLAR, and GDF3, are expressed in seminomas and breast carcinomas. Nanog positivity is notably associated with high-grade ovarian serous carcinoma but is not observed in benign, borderline, or low-grade serous lesions. One study highlights the cellular shuttling of Nanog and its increased stromal presence during cervical cancer progression. Furthermore, Nanog overexpression has been linked to factors such as tumor differentiation, lymph node metastasis, and tumor size, with studies suggesting its predictive value for reduced overall survival (OS) and disease-free survival (DFS) in lung cancer.

Supplied As

200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.

Storage and Stability

Antibody with azide - store at 2 to 8°C. Antibody without azide - store at -20 to -80°C.Antibody is stable for 24 months. Non-hazardous. No MSDS required.

Research Areas

Stem Cell, Transcription Factors

Limitations and Warranty