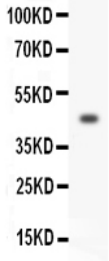
HOXA3 Antibody / Developmental Patterning Transcription Factor Antibody (R30681)

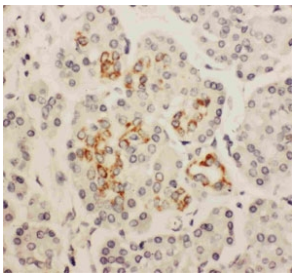
Catalog No.	Formulation	Size
R30681	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide/thimerosal
UniProt	O43365
Applications	Western blot: 0.5-1ug/ml IHC (FFPE): 0.5-1ug/ml
Limitations	This HOXA3 Antibody / Developmental Patterning Transcription Factor Antibody is available for research use only.



HOXA3 Antibody Human SW620 WB. Western blot analysis of HOXA3 expression was performed using anti-HOXA3 antibody in human SW620 cell lysate. HOXA3 is a homeobox transcription factor that regulates developmental gene expression, anterior-posterior patterning, tissue specification, and organogenesis during vertebrate embryogenesis. A specific immunoreactive band is detected at approximately 46 kDa, consistent with the predicted molecular weight of HOXA3. Expression in SW620 colorectal adenocarcinoma cells is consistent with reports implicating dysregulated HOXA3 in tumor progression, cellular differentiation, and tissue remodeling. These results support the utility of HOXA3 Antibody for studies of developmental transcriptional regulation, stem cell biology, angiogenesis, and cancer research.



HOXA3 Antibody Human Pancreatic Cancer IHC. IHC staining of FFPE human pancreatic cancer tissue with HOXA3 antibody demonstrated predominantly nuclear staining in malignant epithelial cells, consistent with the localization of HOXA3 as a homeobox transcription factor that regulates developmental gene expression and cellular differentiation. HOXA3 plays essential roles in embryonic patterning, tissue specification, angiogenesis, and stem cell function, while dysregulated expression has been associated with multiple human malignancies, including pancreatic cancer. The observed nuclear staining supports the transcriptional regulatory function of HOXA3 and its involvement in tumor progression and tissue remodeling. HIER was performed by steaming tissue sections in pH 6 citrate buffer for 20 minutes followed by cooling prior to staining. These results support the utility of HOXA3 Antibody for studies of developmental biology, transcriptional regulation, angiogenesis, and cancer research.

Description

HOXA3 Antibody / Developmental Patterning Transcription Factor Antibody recognizes HOXA3, a member of the highly conserved HOX family of homeobox transcription factors that regulate embryonic patterning, tissue specification, and organogenesis. HOXA3 functions as a sequence-specific DNA-binding protein that controls the expression of genes responsible for establishing positional identity along the anterior-posterior axis during vertebrate development. By coordinating developmental transcriptional programs, HOXA3 directs the formation of multiple tissues including the pharyngeal arches, cardiovascular system, nervous system, and craniofacial structures. As a master developmental regulator, HOXA3 is essential for normal embryogenesis and tissue morphogenesis.

HOXA3 also plays important roles beyond embryonic development by regulating stem cell function, tissue repair, angiogenesis, and wound healing. Studies have demonstrated that HOXA3 promotes vascular remodeling and contributes to the maintenance of progenitor cell populations involved in tissue regeneration. Like other HOX proteins, HOXA3 expression is tightly regulated in both time and space, ensuring proper activation of developmental gene expression programs while maintaining adult tissue homeostasis. Because of these diverse biological functions, HOXA3 Antibody / Developmental Patterning Transcription Factor Antibody is a valuable tool for investigations of developmental biology, vascular biology, stem cell research, and transcriptional regulation.

Aberrant HOXA3 expression has been associated with developmental abnormalities, impaired tissue repair, leukemia, and multiple solid tumors. Altered HOXA3 activity can disrupt normal cellular differentiation, proliferation, migration, and angiogenesis, contributing to disease progression and abnormal tissue remodeling. Ongoing research continues to define the role of HOXA3 in regenerative medicine, cancer biology, and developmental disorders, where modulation of HOXA3-dependent transcriptional networks may provide new therapeutic opportunities.

HOXA3 Antibody / Developmental Patterning Transcription Factor Antibody supports studies of embryonic development, developmental gene regulation, angiogenesis, stem cell biology, tissue regeneration, and cancer research. Researchers frequently use HOXA3 Antibody / Developmental Patterning Transcription Factor Antibody to investigate HOX gene function, organogenesis, vascular development, and mechanisms controlling cellular differentiation. Its central role in vertebrate development and tissue remodeling makes HOXA3 an important marker for both basic and translational biomedical research.

Explore our Transcription Factor Antibodies for Nuclear Signaling and Gene Regulation page for additional markers involved in developmental gene expression, embryonic patterning, and transcriptional control.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the HOXA3 Antibody / Developmental Patterning Transcription Factor Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

An amino acid sequence from the C-terminus of human HOXA3 (HHPSQGRIQEAPKLTHL) was used as the immunogen for this HOXA3 antibody (100% homologous in human, mouse and rat).

Storage

After reconstitution, the HOXA3 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

HOXA3 antibody, Homeobox Protein Hox-A3 antibody, Homeobox Transcription Factor antibody, Developmental Patterning Protein antibody, HOXA3 Protein antibody, Homeobox Protein antibody

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