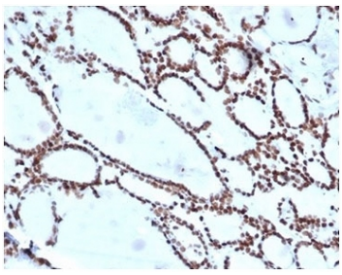
HOXB2 Antibody PCRP-HOXB2-1F2 / Homeobox B2 Antibody [clone PCRP-HOXB2-1F2] (V9653)

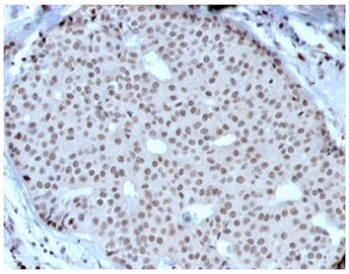
Catalog No.	Formulation	Size
V9653-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V9653-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V9653SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

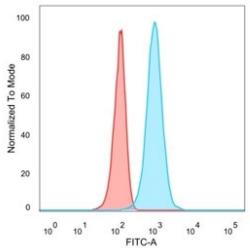
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b
Clone Name	PCRP-HOXB2-1F2
Purity	Protein A/G affinity
UniProt	P14652
Applications	ELISA (order BSA-free format for coating) Flow cytometry: 1-2ug/million cells Immunofluorescence: 1-2ug/ml Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This HOXB2 Antibody PCRP-HOXB2-1F2 / Homeobox B2 Antibody is available for research use only.



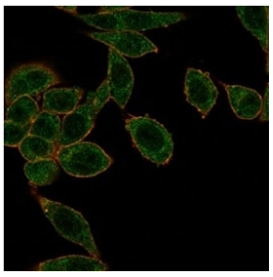
HOXB2 Antibody PCRP-HOXB2-1F2 Staining of Human Thyroid IHC. Immunohistochemistry staining of FFPE human thyroid tissue using HOXB2 Antibody clone PCRP-HOXB2-1F2 at 2 ug/ml for 30 min at RT. HIER was performed by boiling tissue sections in 10 mM Tris with 1 mM EDTA, pH 9, for 20 min followed by cooling. Strong brown immunoreactivity is evident predominantly within nuclei of thyroid follicular epithelial cells.



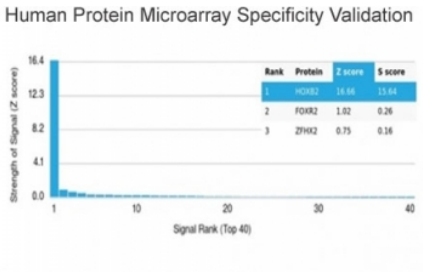
HOXB2 Antibody PCRP-HOXB2-1F2 Staining of Human Breast Carcinoma IHC. Immunohistochemistry staining of FFPE human breast carcinoma tissue using HOXB2 Antibody clone PCRP-HOXB2-1F2 at 2 ug/ml for 30 min at RT. HIER was performed by boiling tissue sections in 10 mM Tris with 1 mM EDTA, pH 9, for 20 min followed by cooling. Prominent brown nuclear staining is visible throughout the carcinoma cell population.



HOXB2 Antibody PCRP-HOXB2-1F2 Detection in HeLa Cervical Cancer Cells FACS. Flow cytometry analysis of PFA-fixed human HeLa cervical cancer cells using HOXB2 Antibody clone PCRP-HOXB2-1F2. The antibody-stained population (blue) shows a clear rightward fluorescence shift relative to the isotype control (red), demonstrating HOXB2 detection under the tested conditions.



HOXB2 Antibody PCRP-HOXB2-1F2 Staining of HeLa Cervical Cancer Cells IF. Immunofluorescence staining of PFA-fixed human HeLa cervical cancer cells using HOXB2 Antibody clone PCRP-HOXB2-1F2. HOXB2 staining is shown in green with phalloidin counterstaining in red. The image shows HOXB2 immunoreactivity distributed throughout the cells, with prominent cytoplasmic/perinuclear signal.



HOXB2 Antibody PCRP-HOXB2-1F2 Protein Microarray Validation. Protein microarray analysis of HOXB2 Antibody clone PCRP-HOXB2-1F2 using a HuProt array containing more than 19,000 full-length human proteins. HOXB2 produces the dominant binding signal on the array. The Z-score represents binding signal relative to the mean signal across the array, while the S-score measures separation between HOXB2 and the next-highest binding protein, supporting specific recognition of the intended target.

Description

HOXB2 Antibody PCRP-HOXB2-1F2 / Homeobox B2 Antibody recognizes HOXB2, a homeobox-containing transcription factor belonging to the Antennapedia homeobox family. HOXB2 is encoded within the HOXB gene cluster on chromosome 17 and contains a conserved homeodomain that mediates sequence-specific DNA binding. As part of the HOX developmental regulatory system, HOXB2 contributes to transcriptional programs that establish positional identity along the anterior-posterior axis during embryonic development.

HOXB2 has a particularly important relationship with nervous system development and hindbrain patterning. Its expression is regulated in defined rhombomeric domains during early hindbrain segmentation, where HOX transcription factors help establish regional neuronal identities. Experimental studies have identified regulatory interactions between HOXB2 and other developmental transcription factors that contribute to the organization and differentiation of hindbrain structures.

Beyond neural development, HOXB2 participates in broader transcriptional regulation during embryogenesis and differentiation. The protein has been associated with developmental processes involving multiple organ systems and has also been studied in hematopoietic differentiation. As a sequence-specific nuclear transcription factor, HOXB2 can influence gene expression through its homeobox DNA-binding domain and interactions with other transcriptional

regulatory proteins. A Homeobox B2 Antibody can therefore support investigation of HOXB2 expression and its relationship to developmental transcriptional programs.

Dysregulated HOX gene expression is also relevant to cancer biology. Altered developmental transcription programs can contribute to changes in cellular identity, proliferation and differentiation, and increased HOXB2 expression has been associated with pancreatic cancer. These observations have extended interest in HOXB2 beyond developmental biology to studies of abnormal transcriptional regulation in malignancy.

Clone PCRP-HOXB2-1F2 is a mouse monoclonal HOXB2 Antibody generated against amino acids 114-220 of human HOXB2. The antibody is Protein Microarray Validated using a HuProt array containing more than 19,000 full-length human proteins. In this analysis, the Z-score represents binding signal relative to the mean signal across the array, while the S-score measures separation between the intended target and the next-highest binding protein, providing complementary measures of target recognition and specificity. Researchers investigating HOXB2 expression and dysregulated transcriptional programs in cancer can explore related targets on our Cancer Marker Antibodies page. NSJ Bioreagents provides antibodies for research into transcription factors and developmental biology. An HOXB2 Antibody provides a research tool for investigating Homeobox B2 expression and its roles in developmental patterning, transcriptional regulation and disease biology.

Researchers investigating HOXB2 expression and dysregulated transcriptional programs in cancer can explore related targets on our Cancer Marker Antibodies page.

Application Notes

Optimal dilution of the HOXB2 Antibody PCRP-HOXB2-1F2 / Homeobox B2 Antibody should be determined by the researcher.

Immunogen

A portion of amino acids 114-220 was used as the immunogen for the HOXB2 antibody.

Storage

Aliquot the HOXB2 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Homeobox B2 antibody, Homeobox protein Hox-B2 antibody, HOX2 antibody, HOX2H antibody, Hox-2.8 antibody, Hox-2H antibody, K8 antibody

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