

## HOXB2 (Transcription Factor) Antibody

Mouse Monoclonal Antibody [Clone PCR-P-HOXB2-1F2]

Catalog No	Format	Size
3212-MSM2-P0	Purified Ab with BSA and Azide at 200ug/ml	20 ug
3212-MSM2-P1	Purified Ab with BSA and Azide at 200ug/ml	100 ug
3212-MSM2-P1ABX	Purified Ab WITHOUT BSA and Azide at 1.0mg/ml	100 ug

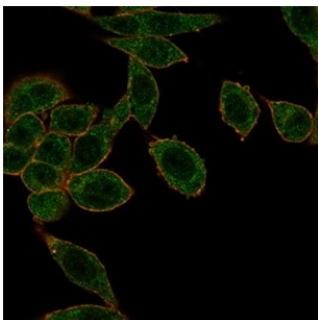
Applications	Tested Dillution	Note
Flow Cytometry (Flow)	1-2ug/million cells	
Immunofluorescence (IF)	1-3ug/ml	
Immunohistochemistry (IHC)	1-2ug/ml	30 min at RT. Staining of formalin-fixed tissues requires heating tissue sections in 10mM Tris with 1mM EDTA, pH 9.0, for 45 min at 95°C followed by cooling at RT for 20 minutes
Western Blot (WB)	2-4ug/ml	

### Product Details

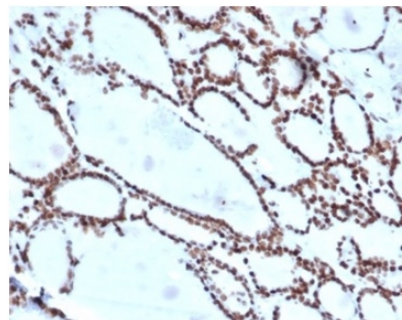
<b>Clone</b>	PCR-P-HOXB2-1F2
<b>Gene Name</b>	HOXB2
<b>Immunogen</b>	Recombinant fragment (aa114-220) of human HOXB2
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Isotype / Light Chain</b>	IgG2b
<b>Mol. Weight of Antigen</b>	37.9kDa
<b>Cellular Localization</b>	Nucleus
<b>Species Reactivity</b>	Human
<b>Positive Control</b>	HeLa, MCF-7 or Jurkat cells.

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

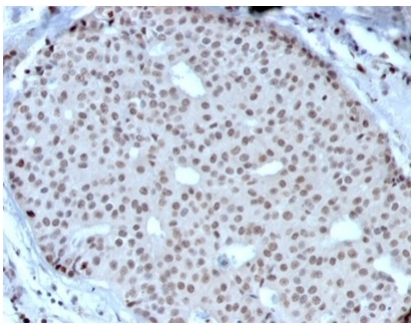
### Product Images for HOXB2 (Transcription Factor) Antibody



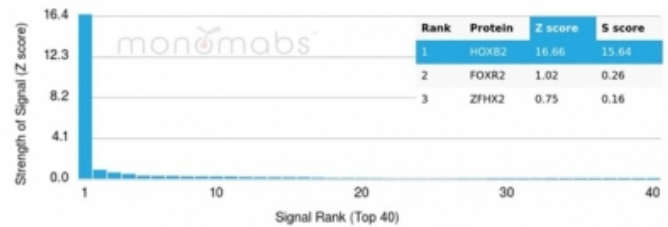
Immunofluorescence Analysis of PFA-fixed HeLa cells stained using HOXB2 Mouse Monoclonal Antibody (PCR-P-HOXB2-1F2). followed by goat anti-mouse IgG-CF488 (green). CF640A phalloidin (red).



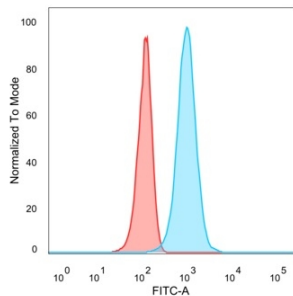
IHC analysis of formalin-fixed, paraffin-embedded human thyroid. Nuclear staining using PCR-P-HOXB2-1F2 at 2ug/ml in PBS for 30min RT. HIER: Tris/EDTA, pH9.0, 45min. 2 °: HRP-polymer, 30min. DAB, 5min.



IHC analysis of formalin-fixed, paraffin-embedded human breast carcinoma. Nuclear staining using PCRP-HOXB2-1F2 at 2ug/ml in PBS for 30min RT. HIER: Tris/EDTA, pH9.0, 45min. 2 °: HRP-polymer, 30min. DAB, 5min.



Analysis of Protein Array containing more than 19,000 full-length human proteins using HOXB2-Monospecific Mouse Monoclonal Antibody (PCR-P-HOXB2-1F2). Z- and S- Score: The Z-score represents the strength of a signal that a monoclonal antibody (MAb) (in combination with a fluorescently-tagged anti-IgG secondary antibody) produces when binding to a particular protein on the HuProt™ array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If targets on HuProt™ are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-score. S-score therefore represents the relative target specificity of a MAb to its intended target. A MAb is considered to be specific to its intended target, if the MAb has an S-score of at least 2.5. For example, if a MAb binds to protein X with a Z-score of 43 and to protein Y with a Z-score of 14, then the S-score for the binding of that MAb to protein X is equal to 29.



Flow cytometric analysis of PFA-fixed HeLa cells. HOXB2 Mouse Monoclonal Antibody (PCR-P-HOXB2-1F2) followed by goat anti-mouse IgG-CF488 (blue); isotype control (red).

## Specificity & Comments

Hox genes play a fundamental role in the development of the vertebrate central nervous system, heart, axial skeleton, limbs, gut, urogenital tract and external genitalia. The homeobox gene HoxB1 is critical to hindbrain development and has phenotypic features frequently observed in autism. Analysis of expression and targeted disruption of HoxB1 demonstrates that it is also essential for patterning progenitor cells along the entire DV axis of rhombomere 4 (r4). HoxB1 maintains this function by acting very early during hindbrain neurogenesis to specify effectors of the Sonic hedgehog and Mash1 signaling pathways. HoxB2 is a homeodomain protein important in neural development that is also expressed during erythropoiesis, hindbrain development and normal human adult lung development. HoxB2 may modulate the amount of gamma-globin mRNA expressed during development and differentiation. In addition, HoxB2 plays an important role in the patterning of hindbrain and pharyngeal arches in the zebrafish.

## Limitations and Warranty

This antibody is available for research use only and is not approved for use in diagnosis. There are no warranties, expressed or implied, which extend beyond this description. Company is not liable for any personal injury or economic loss resulting from this product.

## 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

Developmental Biology