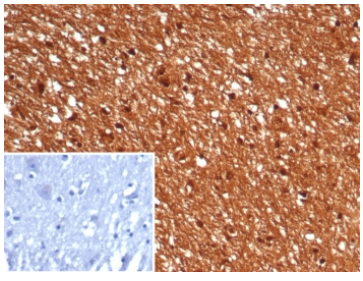
GBX2 Antibody / Hindbrain Development Regulator Antibody [clone GBX2/7235] (V4964)

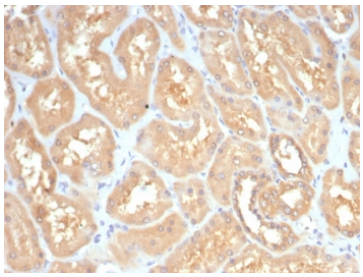
Catalog No.	Formulation	Size
V4964-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4964-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4964SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

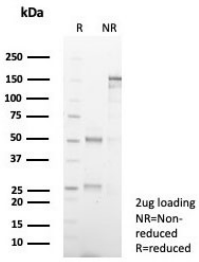
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2, kappa
Clone Name	GBX2/7235
Purity	Protein A/G affinity
UniProt	P52951
Localization	Nucleus
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This GBX2 Antibody / Hindbrain Development Regulator Antibody is available for research use only.



GBX2 Antibody Human Brain IHC. Immunohistochemistry analysis of FFPE human brain tissue stained with GBX2 Antibody clone GBX2/7235 demonstrates strong diffuse cytoplasmic and nuclear HRP-DAB brown staining throughout neural-associated cellular populations, consistent with the role of Gastrulation brain homeobox 2 / GBX2 in neurodevelopmental transcriptional regulation and hindbrain-associated neural patterning pathways. The widespread staining profile aligns with the established function of GBX2 as a developmental homeobox transcription factor involved in central nervous system organization and neuronal differentiation. The negative control inset using PBS in place of primary antibody demonstrates minimal background secondary antibody binding. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



GBX2 Antibody Kidney IHC. Immunohistochemistry analysis of FFPE human kidney tissue stained with GBX2 Antibody clone GBX2/7235 demonstrates diffuse cytoplasmic HRP-DAB brown staining throughout renal tubular epithelial cell populations, consistent with expression of Gastrulation brain homeobox 2 / GBX2 in epithelial-associated cellular compartments. The observed staining pattern supports the role of GBX2 as a developmental transcription factor involved in tissue differentiation and lineage-associated regulatory pathways. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



SDS-PAGE analysis of purified, BSA-free GBX2 antibody (clone GBX2/7235) as confirmation of integrity and purity.

Description

Gastrulation brain homeobox 2 (GBX2) is a homeobox-containing transcription factor involved in embryonic neural patterning, hindbrain specification, and developmental regulation of central nervous system organization. The GBX2 Antibody / Hindbrain Development Regulator Antibody clone GBX2/7235 is designed for detection of GBX2 expression in studies involving neurodevelopment, neural differentiation, embryonic patterning, and developmental transcriptional regulation pathways.

GBX2 is encoded by the GBX2 gene on chromosome 2q37 and belongs to the gastrulation brain homeobox family of developmental transcription factors. The protein localizes predominantly within the nucleus, where it regulates transcriptional programs involved in regional specification of the developing nervous system. GBX2 expression is particularly important during early embryogenesis and contributes to establishment of midbrain-hindbrain boundary organization and posterior neural identity.

Developmental signaling involving GBX2 is closely linked to neural tube patterning and coordinated regional differentiation of neuronal precursor populations. The protein functions together with additional developmental regulators including OTX2, WNT-associated signaling molecules, fibroblast growth factor pathways, and homeobox transcription factor networks that govern central nervous system segmentation and tissue organization during embryonic development.

GBX2 plays a particularly important role in hindbrain-associated developmental programs and specification of neuronal populations within posterior brain regions. Altered GBX2 expression has been associated with abnormal neural patterning, developmental dysregulation, and defects involving central nervous system organization. Because GBX2 functions within tightly coordinated embryologic signaling pathways, the protein is frequently studied alongside markers of neural progenitor differentiation and developmental lineage specification.

Beyond developmental biology, GBX2-associated signaling pathways have also attracted interest in stem cell biology and neuro-oncology research. Expression of developmental transcription factors such as GBX2 may contribute to lineage-associated cellular identity programs and differentiation states in selected tumor and progenitor cell populations. These biologic relationships continue to support research interest in GBX2 across developmental neuroscience, stem cell biology, embryology, and neural differentiation studies.

The clone GBX2/7235 monoclonal antibody supports research applications involving developmental neurobiology, embryonic tissue analysis, neural lineage specification, and transcriptional regulation studies. Immunohistochemical and western blot analyses using GBX2 antibodies commonly demonstrate predominantly nuclear localization patterns consistent with the role of GBX2 as a developmental homeobox transcription factor.

GBX2 continues to serve as an important developmental marker within studies involving hindbrain formation, neural patterning, embryonic signaling pathways, and neurodevelopmental transcriptional regulation.

Additional antibodies involved in neurodevelopment, neural differentiation, embryonic patterning, and central nervous system signaling pathways can be explored within our Neuroscience Antibodies collection.

Application Notes

Optimal dilution of the GBX2 antibody should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 150-350) from the human protein was used as the immunogen for the GBX2 antibody.

Storage

Aliquot the GBX2 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

GBX2 antibody, Gastrulation brain homeobox 2 antibody, Neural development marker antibody, Hindbrain patterning protein antibody, Neurodevelopmental transcription factor antibody