

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Brorin/VWC2 in direct ELISAs. In direct ELISAs, 100% cross-reactivity with recombinant mouse Brorin/VWC2 and no cross-reactivity with recombinant human (rh) vWF-A2 is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 615609
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Brorin/VWC2 Ser28-Met325 Accession # Q2TAL6
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

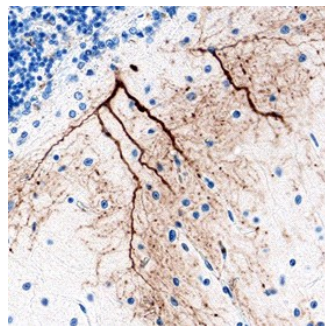
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Immunohistochemistry	8-25 µg/mL	See Below

DATA

Immunohistochemistry



Brorin/VWC2 in Human Brain.
Brorin/VWC2 was detected in immersion fixed paraffin-embedded sections of human brain (cerebellum) using Mouse Anti-Human Brorin/VWC2 Monoclonal Antibody (Catalog # MAB6147) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counter-stained with hematoxylin (blue). Specific staining was localized to cytoplasm in neurons. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Brorin (brain-specific chordin-like protein), also called VWC2, is an ~46 kDa glycoprotein that is a member of the Chordin family of secreted BMP regulators (1-3). The human Brorin cDNA encodes 325 amino acids (aa) including a 27 aa signal sequence and a 298 aa secreted mature protein with two VWFC (von Willebrand factor C) domains. These domains contain a pattern of 10 cysteine residues that is conserved in other family members, with the remaining aa sequence sharing little identity (1). Human Brorin shares 90%, 91% and 95% aa sequence identity with mouse, rat and equine Brorin, respectively. It also shares aa identity with VWC2L (Brorin-like) of 37% overall and 62% within the VWFC domains (4). Brorin is predominantly expressed in embryonic and adult neural tissues in the mouse (1). Expression of Brorin mRNA is concentrated in neurons within the diencephalon and medulla oblongata, but is not detected in the developing cerebral cortex (1). Brorin binds and antagonizes BMPs, interacting via the VWFC domains (1-3). It promotes neurogenesis in mouse neural precursors (1). Knockdown of Brorin in zebrafish embryos results in morphological abnormalities in the brain and eye (1, 4).

References:

1. Koike, N. *et al.* (2007) *J. Biol. Chem.* **282**:15843.
2. Zhang, J-L. *et al.* (2007) *J. Biol. Chem.* **282**:20002.
3. Fujisawa, T. *et al.* (2009) *Biochem. Biophys. Res. Commun.* **385**:215.
4. Miwa, H. *et al.* (2009) *FEBS Lett.* **583**:3643.