

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human FAM20B in direct ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 1018524
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human FAM20B Asn27-Leu409 Accession # O75063
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 either lyophilized or as a 0.2 µm filtered solution in PBS.

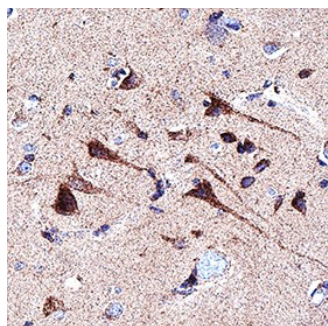
APPLICATIONS

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	5-25 µg/mL	See Below

DATA

Immunohistochemistry



FAM20B in Human Brain (Cortex).
FAM20B was detected in immersion fixed paraffin-embedded sections of human brain (cortex) using Mouse Anti-Human FAM20B Monoclonal Antibody (Catalog # MAB84271) at 5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to neurons. View our protocol for [IHC Staining with VisUCyte HRP Polymer Detection Reagents](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
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. • 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

FAM20B is a member of the FAM20 protein family that has three members in mammals (FAM20A, FAM20B, FAM20C) (1). Human FAM20B shares 97% amino acid sequence identity with mouse and rat FAM20B. FAM20B localizes to the Golgi apparatus where it phosphorylates the xylose residue in the glycosaminoglycan (GAG)-protein linkage region of proteoglycans, which leads to enhanced GAG biosynthesis (2). Accordingly, chondroitin sulfate and heparan sulfate production is increased when FAM20B is over-expressed and reduced following FAM20B knockdown (2). FAM20B knockout mice display embryonic lethality at day E13.5, suggesting that FAM20B has an important role during development (3). Furthermore, in zebrafish, FAM20B mutations result in reduced cartilage matrix production and skeletal defects (4). The enzymatic activity of recombinant human FAM20B is measured using a phosphatase-coupled method (5).

References:

1. Nalbant, D. *et al.* (2005) BMC Genomics **6**:11.
2. Koike, T. *et al.* (2009) Biochem. J. **421**:157.
3. Vogel, P. *et al.* (2012) Vet. Pathol. **49**:998.
4. Eames, B.F. *et al.* (2011) PLoS Genet. **7**:e1002246.
5. Wu, Z.L. (2011) PLoS One **6**:e23172.