

Monoclonal Mouse IgG₁ Clone # 1018512 Catalog Number: MAB8427

DESCRIPTION		
Species Reactivity	Human	
Specificity	Detects human FAM20B in direct ELISAs.	
Source	Monoclonal Mouse IgG ₁ Clone # 1018512	
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
Western Blot	2 µg/mL	See Below
	2 µg/me	

DATA



Detection of Human FAM20B by Western Blot. Western blot shows lysates of ZR-75 human breast cancer cell line. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human FAM20B Monoclonal Antibody (Catalog # MAB8427) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for FAM20B at approximately 46 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND S	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.

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