

Amnionless (C-10): sc-365384

BACKGROUND

Megaloblastic anemia 1 (MGA1), also referred to as MGA1 Norwegian type or Imlerslund-Gräsbeck syndrome (I-GS), is a hereditary, recessive disorder caused by defects in the AMN gene. Patients suffering from MGA1 have a selective malabsorption of vitamin B12, causing impaired function of thymidine synthase which in turn interrupts DNA synthesis. Amnionless protein, encoded for by the AMN gene, is crucial for vitamin B12 absorption. It modulates a BMP (bone morphogenetic protein) signaling pathway and is therefore important for trunk mesoderm production during development. Amnionless is a membrane protein that interacts with cubulin and is primarily expressed in colon, kidney and small intestine. Shorter isoforms can also be detected in thymus, testis and peripheral blood leukocytes.

CHROMOSOMAL LOCATION

Genetic locus: AMN (human) mapping to 14q32.32; Amn (mouse) mapping to 12 F1.

SOURCE

Amnionless (C-10) is a mouse monoclonal antibody raised against amino acids 20-248 mapping near the N-terminus of Amnionless of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Amnionless (C-10) is available conjugated to agarose (sc-365384 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365384 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365384 PE), fluorescein (sc-365384 FITC), Alexa Fluor® 488 (sc-365384 AF488), Alexa Fluor® 546 (sc-365384 AF546), Alexa Fluor® 594 (sc-365384 AF594) or Alexa Fluor® 647 (sc-365384 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365384 AF680) or Alexa Fluor® 790 (sc-365384 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Amnionless (C-10) is recommended for detection of Amnionless of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Amnionless siRNA (h): sc-60069, Amnionless siRNA (m): sc-60070, Amnionless shRNA Plasmid (h): sc-60069-SH, Amnionless shRNA Plasmid (m): sc-60070-SH, Amnionless shRNA (h) Lentiviral Particles: sc-60069-V and Amnionless shRNA (m) Lentiviral Particles: sc-60070-V.

Molecular Weight of extracellular domain Amnionless: 35 kDa.

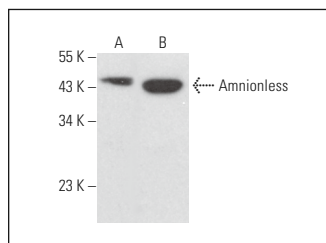
Molecular Weight of membrane-bound Amnionless: 45 kDa.

Positive Controls: HCT-116 whole cell lysate: sc-364175, HeLa whole cell lysate: sc-2200 or mouse kidney extract: sc-2255.

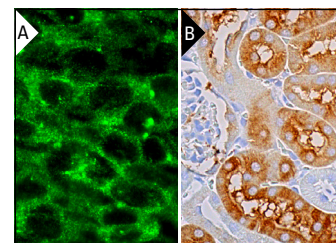
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Amnionless (C-10): sc-365384. Western blot analysis of Amnionless expression in HCT-116 (A) and HeLa (B) whole cell lysates.



Amnionless (C-10): sc-365384. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse kidney tissue showing cytoplasmic staining of cells in tubules. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detection reagents used: m-IgGκ BP-B: sc-516142 and ImmunoCruz® ABC Kit: sc-516216 (B).

SELECT PRODUCT CITATIONS

1. Zeng, B., et al. 2017. ORAI channels are critical for receptor-mediated endocytosis of albumin. *Nat. Commun.* 8: 1920.
2. Takahashi, M., et al. 2020. Six1 is required for signaling center formation and labial-lingual asymmetry in developing lower incisors. *Dev. Dyn.* 249: 1098-1116.
3. Gan, C., et al. 2022. Novel pathogenic variants in CUBN uncouple proteinuria from renal function. *J. Transl. Med.* 20: 480.
4. Liang, S., et al. 2023. Generation and characterization of an inducible renal proximal tubule-specific CreERT2 mouse. *Front. Cell Dev. Biol.* 11: 1171637.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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