Mouse Legumain/Asparaginyl Endopeptidase Alexa Fluor® 532-conjugated Antibody

Monoclonal Rat IgG_{2A} Clone # 301417

Catalog Number: FAB2058X

100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Legumain/Asparaginyl Endopeptidase in direct ELISAs and Western blots. In Western blots, approximately 25% cross-reactivity with recombinant human Legumain is observed.
Source	Monoclonal Rat IgG_{2A} Clone # 301417
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Legumain/Asparaginyl Endopeptidase Val18-Tyr435 Accession # O89017
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Legumain is a lysosomal cysteine protease found in all mouse tissues examined, but was particularly abundant in kidney and placenta (1). Legumain plays a pivotal role in the endosomal/lysosomal degradation system because the Legumain deficiency causes the accumulation of pro cathepsins B, H and L, another group of lysosomal cysteine proteases (2). Over-expression of Legumain in tumors is significant for invasion/metastasis (3). Also known as asparaginyl endopeptidase, it specifically cleaves peptide bonds with Asn at the P1 position. Nevertheless, it also cleaves peptide bonds with Asp at the P1 position. Auto-activation of pro Legumain involves both types of cleavage, which results in the removal of the pro peptides in both C- and N-termini (4). In addition, Legumain activates pro MMP-2 and processes bacterial antigens for MHC class II presentation and pro thymosin α to thymosin α_1 and thymosin α_{11}, two acidic peptides with immunoregulatory properties (5-7). Mouse Legumain is synthesized as a 435 amino acid precursor with a signal peptide (residues 1 to 17). The pro enzyme (residues 18 to 435) was expressed with an N-terminal His tag. The purified pro enzyme can be activated under the conditions as described above. Legumain activity can be inhibited by rmCystatin C and recombinant human cystatins C and E/M (R&D Systems, Catalog # 1238-PI, 1196-PI, and 1286-PI).

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