Human Legumain/Asparaginyl Endopeptidase Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: BAF2199

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Legumain/Asparaginyl Endopeptidase in ELISAs and Western blots. In sandwich immunoassays, less than 0.1% cross-reactivity with recombinant mouse Legumain is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Legumain/Asparaginyl Endopeptidase Ile18-Tyr433 Accession # Q99538
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

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	0.1 µg/mL	Recombinant Human Legumain (Catalog # 2199-CY)
Human Legumain Sandwich Immunoassay		**Reagent**
ELISA Capture	2-8 µg/mL	Human Legumain/Asparaginyl Endopeptidase Antibody (Catalog # MAB21992)
ELISA Detection	0.1-0.4 µg/mL	Human Legumain/Asparaginyl Endopeptidase Biotinylated Antibody (Catalog # BAF2199)
Standard		Recombinant Human Legumain/Asparaginyl Endopeptidase (Catalog # 2199-CY)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
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

Legumain is a lysosomal cysteine protease whose activity is found in several tissues tested (1, 2). 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 (3). Over-expression of Legumain in tumors is significant for invasion/metastasis (4). 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 the cleavage, which result in the removal of the pro peptides in both C- and N-termini (5). 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 (6-8). Human Legumain is synthesized as a 433 amino acid precursor with a signal peptide (residues 1-17). The pro enzyme (residues 18-433) was expressed with an N-terminal His tag. This activity of Legumain can be inhibited by rhCystatins C and E/M and recombinant mouse Cystatin C (R&D Systems, Catalog # 1196-PI, 1286-PI and 1238-PI, respectively).

References:

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