Human α_2-Macroglobulin Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: BAF1938

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human α_2-Macroglobulin in Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Human plasma-derived α_2-Macroglobulin
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

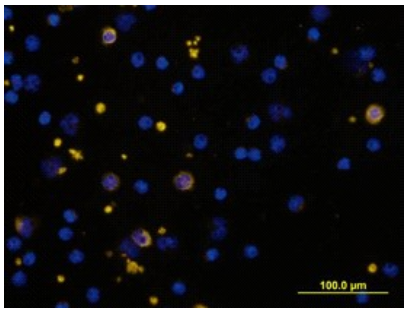
APPLICATIONS

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	Human α_2-Macroglobulin (Catalog # 1938-PI)
Immunocytochemistry	5-15 µg/mL	See Below

DATA

Immunocytochemistry



α_2-Macroglobulin in Human PBMCs. α_2-Macroglobulin was detected in immersion fixed human peripheral blood mononuclear cells (PBMCs) using Goat Anti-Human α_2-Macroglobulin Biotinylated Antigen Affinity-purified Polyclonal Antibody (Catalog # BAF1938) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Streptavidin (yellow; Catalog # NL999) and counterstained with DAPI (blue). View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

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

Human α_2-macroglobulin (hα2M) is a serum glycoprotein that has sequence similarity to other members of the α2M family including complement components C3, C4 and C5 (1). α2M is synthesized as a polypeptide of 1474 amino acids with a signal peptide (23 residues) (2). The mature protein is a tetramer (720 kDa) of 4 identical subunits (180 kDa), which form two disulfide bond-linked dimers. As a general and irreversible protease inhibitor implicated in many processes, α2M is able to inhibit all four classes of proteases by a unique trapping mechanism. The bait region of hα2M (residues 690-728) contains specific cleavage sites for different proteases. The cleavage of the bait region by a protease induces a conformation change in α2M, which then traps and forms a covalent bond with the protease. The trapped protease remains active against small peptide substrates but loses its ability to interact with large protein substrates or inhibitors.

References:

1. Sottrup-Jensen, L. *et al.* (1985) Proc. Natl. Acad. Sci. USA **82**:9.
2. Kan, C.C. *et al.* (1985) Proc. Natl. Acad. Sci. USA **82**:2282.

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