α-2M (H-60): sc-28870

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BIOTECHNOLOGY

The Power to Question

BACKGROUND

α-2Macroglobulin (α-2M) is a homotetrameric serum protein consisting of four identical subunits that form dimers through disulfide bonds. Initially, α-2M was characterized as a pan-proteinase inhibitor that was able to "bait" proteinases into cleaving specific peptide sequences on α-2M. This interaction induces a conformational change in α-2M, thus enabling it to "trap" the proteinase and inhibit its further activity. Subsequently, α-2M has also been shown to function as a carrier protein and regulator of cytokines during inflammation. Circulating transforming growth factor β (TGFβ) in serum is primarily bound to α-2M, which renders TGFβ inactive. α-2M also binds to IL-6 and, thereby, increases the concentration of IL-6 near lymphocytes, hepatocytes and stem cells involved in mediating the inflammatory cascade. Mutations and deletions in the gene encoding α-2M are associated with an increased incidence of Alzheimer's Disease (AD), which is consistent with the role of α-2M in mediating the clearance and degradation of A β, the major component of β-Amyloid deposits accumulated during AD.

CHROMOSOMAL LOCATION

Genetic locus: A2M (human) mapping to 12p13.31; A2m (mouse) mapping to 6 F1.

SOURCE

α-2M (H-60) is a rabbit polyclonal antibody raised against amino acids 161-220 mapping near the N-terminus of α-2M of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

α-2M (H-60) is recommended for detection of α-2M of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

α-2M (H-60) is also recommended for detection of α-2M in additional species, including canine.

Suitable for use as control antibody for α-2M siRNA (h): sc-40297, α-2M siRNA (m): sc-40298, α-2M shRNA Plasmid (h): sc-40297-SH, α-2M shRNA Plasmid (m): sc-40298-SH, α-2M shRNA (h) Lentiviral Particles: sc-40297-V and α-2M shRNA (m) Lentiviral Particles: sc-40298-V.

Molecular Weight of α-2M tetrameric protein: 718 kDa.

Molecular Weight of α-2M subunit: 185 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA

34 K —
«···· α-2M fusion
protein
23 K —
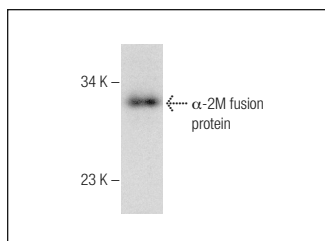
α-2M (H-60): sc-28870. Western blot analysis of human recombinant α-2M fusion protein.

SELECT PRODUCT CITATIONS

1. Cimica, V., et al. 2007. Serial analysis of gene expression (SAGE) in rat liver regeneration. Biochem. Biophys. Res. Commun. 360: 545-552.

2. Nunes, A.F., et al. 2012. TUDCA, a bile acid, attenuates amyloid precursor protein processing and amyloid-β deposition in APP/PS1 mice. Mol. Neurobiol. 45: 440-454.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS
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Try **α-2M (H-8): sc-390544** or **α-2M (9A3): sc-81541**, our highly recommended monoclonal alternatives to α-2M (H-60).