



Aminopeptidase A (FG35.4): sc-52444

BACKGROUND

Aminopeptidase A, also designated APA, gp160 human kidney differentiation antigen, glutamyl aminopeptidase, or enpep, is a differentiation-related kidney glycoprotein. As a cell surface, zinc-dependent metalloprotease, aminopeptidase A specifically cleaves amino-terminal acidic residues from peptide substrates such as angiotensin II. APA is expressed on the surface of epithelial cells of the glomerulus and proximal tubule cells of the human nephron where it may mediate the constitutive trafficking of GLUT4-containing vesicles. These GLUT4-containing vesicles are tissue-specific secretory-like microsomal structures that mediate Insulin-dependent translocation of GLUT4 to the cell surface in fat and muscle cells. Mutations in the gp160/APA gene, including loss of protein expression or enzymatic activity occur in 20% of primary clear cell renal carcinomas.

REFERENCES

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2. Cooper, M.D., et al. 1986. A novel cell surface molecule on early B-lineage cells. *Nature* 321: 616-618.
3. Wu, Q., et al. 1990. Molecular cloning of the murine BP-1/6C3 antigen: a member of the zinc-dependent metalloprotease family. *Proc. Natl. Acad. Sci. USA* 87: 993-997.
4. Hardy, R.R., et al. 1991. Resolution and characterization of pro-B and pre-pro-B cell stages in normal mouse bone marrow. *J. Exp. Med.* 173: 1213-1225.
5. Sherwood, P.J. and Weissman, I.L. 1991. The growth factor IL-7 induces expression of a transformation-associated antigen in normal pre-B cells. *Int. Immunol.* 2: 399-406.
6. Nanus, D.M., et al. 1993. Molecular cloning of the human kidney differentiation antigen gp160: human aminopeptidase A. *Proc. Natl. Acad. Sci. USA* 90: 7069-7073.

CHROMOSOMAL LOCATION

Genetic locus: Npep (mouse) mapping to 3 G3.

SOURCE

Aminopeptidase A (FG35.4) is a rat monoclonal antibody raised against Aminopeptidase A of mouse origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Aminopeptidase A (FG35.4) is available conjugated phycoerythrin (sc-52444 PE, 100 tests in 2 ml), for IF, IHC(P) and FCM.

STORAGE

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

APPLICATIONS

Aminopeptidase A (FG35.4) is recommended for detection of Aminopeptidase A of mouse origin by immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for Aminopeptidase A siRNA (m): sc-41549, Aminopeptidase A shRNA Plasmid (m): sc-41549-SH and Aminopeptidase A shRNA (m) Lentiviral Particles: sc-41549-V.

Molecular Weight of Aminopeptidase A: 160 kDa.

RESEARCH USE

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

PROTOCOLS

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