



Monoclonal Anti-human DPPII/QPP/DPP7 Antibody

ORDERING INFORMATION

Catalog Number: MAB3438

Clone: 398011

Lot Number: ZNH01

Size: 100 µg

Formulation: 0.2 µm filtered solution in PBS with 5% trehalose

Storage: -20° C

Reconstitution: sterile PBS

Specificity: human DPPII

Immunogen: NS0-derived rhDPPII

Ig class: rat IgG_{2A}

Recommended Application:
Neutralization

Other Application:
Western blot

Background

Dipeptidyl-peptidase II (DPPII), also known as quiescent cell proline dipeptidase (QPP) and DPP7, shares some substrate and cleavage specificity with DPPIV/CD26, DPP8, DPP9 and seprase/FAP (fibroblast activation protein), members of the S09 family of serine proteases. They are all prolyl proteases that cleave proteins and peptides after proline residues. However, DPPII is not a member of the S09 family, but a member of the S28 family that also includes lysosomal Pro-X carboxypeptidase/prolylcarboxypeptidase/PRCP and thymus-specific serine peptidase/PRSS16. The amino acid sequence of human DPPII is 99%, 81%, 80%, 79% and 65% identical to that of chimpanzee, mouse, rat, dog and chicken.

Preparation

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a rat immunized with purified, NS0-derived, recombinant human DPPII (rhDPPII; Accession # Q9UHL4; aa 22 - 492; R&D Systems, Catalog # 3438-SE). The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography.

Formulation

Lyophilized from a 0.2 µm filtered solution in phosphate-buffered saline (PBS) with 5% trehalose.

Endotoxin Level

< 0.1 EU per 1 µg of the antibody as determined by the LAL method.

Reconstitution

Reconstitute with sterile PBS. If 0.2 mL of PBS is used, the antibody concentration will be 500 µg/mL.

Storage

Lyophilized samples are stable for twelve months from date of receipt when stored at -20° C to -70° C. Upon reconstitution, the antibody can be stored at 2° - 8° C for 1 month without detectable loss of activity. Reconstituted antibody can also be aliquotted and stored frozen at -20° C to -70° C in a manual defrost freezer for six months without detectable loss of activity. **Avoid repeated freeze-thaw cycles.**

Specificity

This antibody detects rhDPPII in direct ELISAs and Western blots.

Applications

Neutralization - This antibody has been used to inhibit/neutralize the enzymatic activity of rhDPPII (R&D Systems, Catalog # 3438-SE). The antibody was preincubated with the enzyme at different molar ratios at room temperature for 30 minutes. The enzyme was then assayed with a fluorogenic peptide substrate. 50% of the proteolytic activity was inhibited by the antibody at approximately 0.12 µg/mL (IC₅₀) under conditions in which the enzyme was present at 0.1 µg/mL and the substrate concentration was 10 µM. Considering the molecular masses of the enzyme (53 kDa) and the antibody (150 kDa), IC₅₀ was achieved at approximately 1:2 molar ratio of the antibody to the enzyme.

Western blot - This antibody can be used at 1 - 2 µg/mL with the appropriate secondary reagents to detect human DPPII. Using a colorimetric detection system, the detection limit for rhDPPII is approximately 10 ng/lane under non-reducing conditions. Use of this antibody under reducing conditions is not recommended. Chemiluminescent detection with WesternGlo™ Chemiluminescent Detection Substrate (R&D Systems, Catalog # AR004) will increase sensitivity by 5 to 50 fold.

For reducing conditions, the use of human DPPII antibodies, R&D Systems Catalog # MAB34381 and AF3438 are recommended.

Optimal dilutions should be determined by each laboratory for each application.