



POLYCLONAL ANTIBODY

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Catalog No. KUF-P001

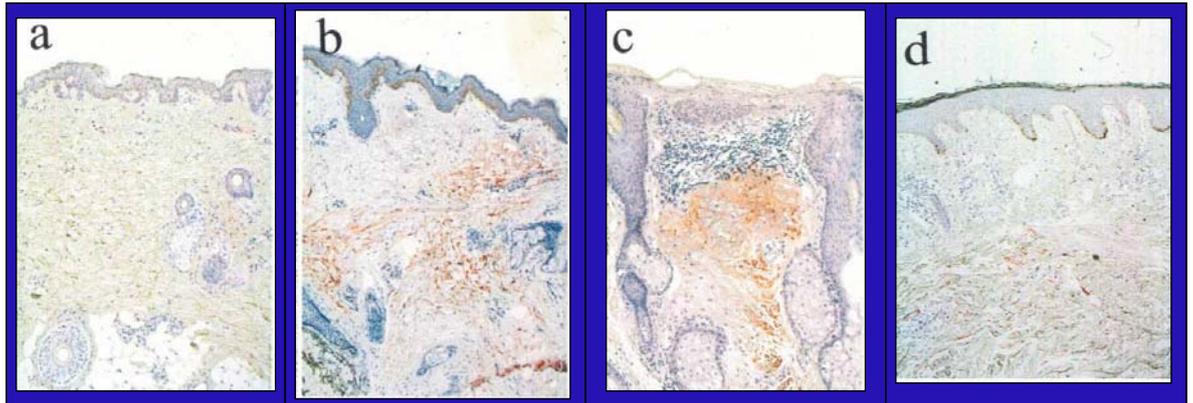
Anti D- β -Aspartic acid polyclonal antibody

BACKGROUND

Biologically uncommon D-aspartyl (Asp) residues have been reported in proteins of the tooth, eye lens, aorta, and brain in elderly humans. Aspartic acid is the most easily racemizable amino acid and D-Asp may be formed by racemization in metabolically inactive tissues during the chronological aging process. We prepared a highly specific polyclonal antibody against peptide Gly-Leu-D- β -Asp-Ala-Thr-Gly-Leu-D- β -Asp-Ala-Thr-Gly-Leu-D- β -Asp-Ala-Thr (anti-peptide 3R antibody) which corresponds to three repeats of positions 149–153 of human α A-crystallin. This antibody can distinguish the configuration of the Asp-residue, that is, it reacts very strongly with the D- β -Asp-containing peptide but not react with the L- α -Asp-, L- β -Asp- and D- α -Asp-containing peptides.

Product type	Primary antibodies
Host	Rabbit
Source	Serum
Form	Liquid. Immunogen affinity purified. PBS (pH 7.4) with 10 mg/ml of BSA.
Volume	100 μ l
Specificity	Leu-D-beta-Asp-Ala
Antigen	Gly-Leu-D β -Asp-Ala-Thr-Gly-Leu-D β -Asp-Ala-Thr-Gly-Leu-D β -Asp-Ala-Thr

Application notes	Recommended use WB, IHC (Paraffin), ELISA Recommended dilutions Western blotting, 1/300 Immunohistochemistry, It depends on tissue sites. ELISA, 1/300 Optimal dilutions/concentrations should be determined by the end user.
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Immunoreactivity of the antibody for D-b-Asp-containing peptide (peptide 3R) in the skin. Skin specimens, obtained from the sun-exposed area (face) of 9-year-old (A), 59-year-old (B), and 86-year-old (C), or sun-protected area (buttock) of 85-year-old (D), were embedded in paraffin and then immunoreacted with the antibody for peptide 3R at 1:100 dilution for 24 h. The sections were incubated with rabbit anti-Ig antibody at 1:50 dilution for 2h. Antigen-antibody complex was visualized by avidin-biotin complex (60 in A, B and D, 100 in C).

Storage

Store below -20°C (below -70°C for prolonged storage).
Aliquot to avoid cycles of freeze/thaw.

References

- 1) Fujii, N., Shimo-oka, T., Ogiso, M., Momose, Y., Kodama, M., & Akaboshi, M., Localization of biologically uncommon D- β -aspartate-containing α A-crystallin in human eye lens, (2000) Mol. Vis., 6, 1-5.
- 2) Fujii, N., Tajima, S., Tanaka, N., Fujimoto, N., Takata, T., Shimo-Okac, T., The presence of D-b-aspartic acid-containing peptides in elastic fibers of sun-damaged skin: a potent marker for ultraviolet-induced skin aging, (2002) BBRC 294, 1047-1051
- 3) Aki, K., Fujii, N., Saito, T., Fujii, N., Characterization of an antibody that recognizes peptides containing D- β -aspartyl residues, (2012) Mol. Vis., 18, 996-1003.

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