Mouse Klotho β Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG

Catalog Number: BAF2619

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Klotho β in Western blots. In Western blots, approximately 5% cross-reactivity with recombinant mouse Klotho is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Klotho β Phe53-Leu995 Accession # NP_112457
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	Recombinant Mouse Klotho β (Catalog # 2619-KB)

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

Klotho β, a divergent structural member of the glycosidase I superfamily, is expressed primarily in the liver and pancreas, with lower expression in adipose tissue (1). Like Klotho, Klotho β facilitates binding between FGF19 subfamily members and their receptors via formation of a ternary complex (2). The Klotho β mediated interaction of FGF15 (human FGF19) with FGF Receptor 4 in the liver negatively regulates bile acid synthesis by controlling the secretion of two key bile acid synthase genes, cholesterol 7-α hydroxylase (Cyp7a1) and sterol 12-α hydroxylase (Cyp8b1) (2-4). Klotho β is also a cofactor for the interaction of FGF21 with FGF Receptor 1c in adipocytes, which allows FGF21 to stimulate GLUT1 expression, upregulating adipocyte insulin-dependent glucose uptake (2, 3, 5). The 1043 amino acid (aa) type I transmembrane protein is composed of a 51 aa signal sequence, a 943 aa extracellular domain (ECD) containing two glycosidase-like regions, a 21 aa transmembrane domain, and 28 aa intracellular tail. Since Klotho-related proteins lack critical active site Glu residues present in β-glycosidases, it was initially unclear whether they were functional enzymes (1, 6). However, glucuronidase activity has since been demonstrated for Klotho, indicating that physiologically relevant enzymatic activity for Klotho β is also possible (7). The extracellular domain shares 79%, 79%, 80% and 67% identity with human, bovine, canine and rat Klotho β, respectively. The low identity with rat reflects aa discordance within rodent ECD.

References:

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Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449