Human Klotho β Alexa Fluor® 594-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # 885935

Catalog Number: FAB5889T

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Klotho β in direct ELISA and Western blots.
Source	Monoclonal Mouse IgG_{2A} Clone # 885935
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Klotho β Phe53-Leu997 Accession # Q86Z14
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Klotho β (b-Klotho or KLB) is a 125-135 kDa member of the KL family, Glycosyl Hydrolase 1 superfamily of proteins. It plays key role in the biology of the endocrine FGFs (FGF-15/19; 21; 23). KLB appears to serve as a signaling cofactor for select FGFRs, including FGFR-1c, -2c, -3c and FGFR4. The cofactor is known to constitutively interact with FGFRs, promote FGF binding to their appropriate FGFRs, and to bind directly to FGF-19 and FGF-21. Notably, FGF-23 appears to utilize a-Klotho/KL for its FGFR signaling cofactor, and FGF-1, while not dependent upon KLB for signaling, can utilize KBL to potentiate certain activities. KLB is expressed on select cells, including adipocytes and hepatocytes. Human KLB is a 1044 amino acids (aa) type III transmembrane (TM) protein (i.e.-a type I TM protein lacking a signal sequence). It contains a 996 aa extracellular region (aa 1-996) and a 27 aa cytoplasmic domain (aa 1018-1044). The extracellular region contains two glycosyl hydrolase domains (aa 77-508 and 517-967) plus eleven potential N-linked glycosylation sites. Neither hydrolase domain is active as they lack a key Glu residue needed for activity. Over aa 53-997, human KLB shares 80% aa sequence identity with mouse KLB. And relative to KL/a-Klotho, human KLB and KL share just 44% aa sequence identity over the entire length of the molecules.

PRODUCT SPECIFIC NOTICES

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