

## DESCRIPTION

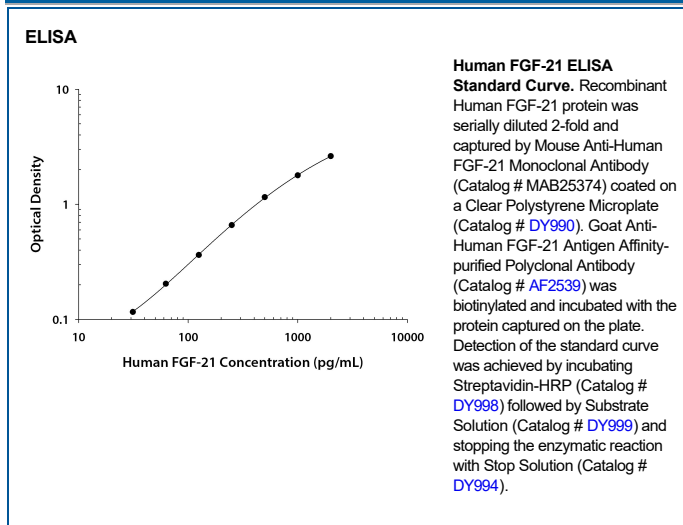
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human FGF-21 in direct ELISAs.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 461801
<b>Purification</b>	Protein A or G purified from cell culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human FGF-21 His29-Ser209 Accession # Q9NSA1
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

## 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.

<b>ELISA</b>	<p>This antibody functions as an ELISA capture antibody when paired with Goat Anti-Human FGF-21 Antigen Affinity-purified Polyclonal Antibody (Catalog # <a href="#">AF2539</a>).</p> <p><i>This product is intended for assay development on various assay platforms requiring antibody pairs. We recommend the Human FGF-21 DuoSet ELISA Kit (Catalog # <a href="#">DY2539</a>) for convenient development of a sandwich ELISA or the Human FGF-21 Quantikine ELISA Kit (Catalog # <a href="#">DF2100</a>) for a complete optimized ELISA.</i></p>
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## DATA



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**BACKGROUND**

Fibroblast growth factor 21 (FGF-21) is a member of the FGF gene family, which currently contains 22 human members. Based on its structure, it is further classified as an FGF-19 subfamily member. This subfamily includes FGF-19, -21, and -23. Like all other FGF subfamilies, FGF-19 subfamily members contain a 120 amino acid (aa) core FGF domain that exhibits a  $\beta$ -trefoil structure (1, 2). Unlike other FGF subfamilies, FGF-19 subfamily members apparently exhibit poor binding to ECM, resulting in highly diffusible molecules (3). The cDNA for FGF-21 predicts a 209 aa polypeptide that contains a 28 aa signal sequence and a 181 aa mature region (4). Notably, FGF-21, as well as FGF-19 show limited binding to heparin (4). One potential alternate splice form has been reported. It shows a 43 aa substitution for the C-terminal 12 aa of the standard form (5). Mature human FGF-21 shows 81% aa identity to mouse FGF-21, and is known to be active on mouse cells (4, 6). The FGF-19 subfamily is considered endocrine in nature. All three subfamily members impact some aspect of metabolism, all three are induced by a nuclear receptor heterodimer that includes RXR, and all three utilize Klotho family members for signal transduction (7, 8, 9). FGF-21 is produced by hepatocytes in response to free fatty acid (FFA) stimulation of a PPAR $\alpha$ /RXR dimeric complex (3, 7, 10, 11). This situation occurs clinically during starvation, or following the ingestion of a high-fat/low-carbohydrate diet. Upon FGF-21 secretion, white adipose tissue is induced to release FFAs from triglyceride stores. Once FFAs reach hepatocytes, they are oxidized and reduced to acetyl-CoA. The acetyl-CoA is recombined into 4-carbon ketone bodies (acetoacetate and  $\beta$ -hydroxybutyrate), released, and transported to peripheral tissues for TCA processing and energy generation (11, 12).

**References:**

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