

DESCRIPTION

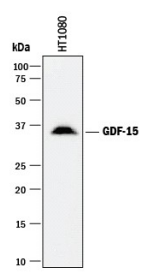
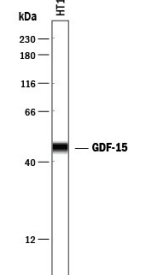

Species Reactivity	Human
Specificity	Detects human GDF-15 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 65% cross-reactivity with recombinant mouse (rm) GDF-15 is observed, and less than 1% cross-reactivity with rmGDF-1, rmGDF-3, and rmGDF-11 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human GDF-15 Ala197-Ile308 Accession # Q99988
Formulation	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.

	Recommended Concentration	Sample
Western Blot	0.5 µg/mL	See Below
Simple Western	5 µg/mL	See Below

DATA

<p>Western Blot</p>  <p>Detection of Human GDF-15 by Western Blot. Western blot shows lysate of HT1080 human fibrosarcoma cell line. PVDF membrane was probed with 0.5 µg/mL of Goat Anti-Human GDF-15 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF957) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for GDF-15 at approximately 35 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p>Simple Western</p>  <p>Detection of Human GDF-15 by Simple Western™. Simple Western lane view shows lysate of HT1080 human fibrosarcoma cell line, loaded at 0.2 mg/mL. A specific band was detected for GDF-15 at approximately 47 kDa (as indicated) using 5 µg/mL of Goat Anti-Human GDF-15 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF957) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.</p> 
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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. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 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

Growth Differentiation Factor 15 (GDF-15), also called Macrophage inhibitory cytokine-1 (MIC-1), placental transforming growth factor- β , prostate-derived factor, and placental bone morphogenetic protein, is a divergent member of the transforming growth factor β (TGF- β) superfamily. GDF-15 is highly expressed in placenta and is expressed at lower levels in kidney, pancreas, prostate and colon. It is also widely expressed in brain. Similar to other TGF- β family proteins, GDF-15 is synthesized as a large precursor protein that is cleaved at the dibasic cleavage site (RXXR) to release the carboxy-terminal domain. The carboxy-terminal domain of GDF-15 contains the characteristic seven conserved cysteine residues necessary for the formation of the cysteine knot and the single interchain disulfide bond. Furthermore, the carboxy-terminal domain contains two additional cysteine residues that form a fourth intrachain disulfide bond. Biologically active GDF-15 is a disulfide-linked homodimer of the carboxy-terminal 112 amino acid residues. Mature human GDF-15 shares 66.1% and 68.7% amino acid sequence similarity with rat and mouse GDF-15, respectively, which are remarkably low homologies between species in TGF- β superfamily. GDF-15 has been shown to have various functions, including inhibition of production of tumor necrosis factor α (TNF- α) from lipopolysaccharide-stimulated macrophages, induction of cartilage formation, early-stage endochondral bone formation, and promotion of neuronal survival.

References:

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