



Qty: 100 µg/400 µL

Rabbit anti-GDF-15

Catalog No. 42-1700

Lot No.

## Rabbit anti-GDF-15

### FORM

This polyclonal antibody is supplied as a 400 µL aliquot at a concentration of 0.25 mg/mL in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. This antibody is epitope-affinity purified from rabbit antiserum.

PAD: ZMD.537

### IMMUNOGEN

Synthetic peptide derived from the N-terminal region of the human GDF-15 protein

### SPECIFICITY

This antibody is specific for the pro-form (non-secreted) of the GDF-15 (growth/differentiation factor 15, MIC-1, NRG-1, NAG-1) protein. On Western blots, it identifies the target band at ~30 kDa.

### REACTIVITY

Reactivity has been confirmed with human LNCaP.FGC cell lysates.

Sample	Western Blotting
Human	+++

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

### USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

**Western Blotting:** 2 µg/mL

### STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long-term storage. Avoid repeated freezing and thawing.

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**BACKGROUND**

GDF-15 (growth/differentiation factor 15, MIC-1, NRG-1, NAG-1) belongs to the TGF- $\beta$  superfamily of proteins, and its expression in monocytoid cells is up-regulated by a variety of stimuli associated with activation, including TGF- $\beta$ , IL-1 $\beta$ , TNF- $\alpha$ , IL-2 and MCSF (macrophage colony-stimulating factor).<sup>1</sup> GDF-15 mRNA and protein are widely distributed in the developing and adult central and peripheral nervous systems.<sup>2</sup> It acts as a novel neurotrophic factor with prominent effect on dopaminergic and serotonergic neurons and may thus have a potential for the treatment of Parkinson's disease and disorders of the serotonergic system.<sup>2</sup> In peripheral organs GDF-15 is expressed by epithelial cells in prostate, salivary, and mammary glands, placenta, airway and intestinal epithelia, and kidney proximal tubules and collecting ducts.<sup>3</sup> High levels of secreted GDF-15 are also present in the sera of pregnant women, as well as in amniotic fluid and placental extracts.<sup>4</sup>

The dietary antitumorigenic compound, resveratrol, increases the expression of p53 (a tumor suppressor protein), prior to GDF-15 induction.<sup>5</sup> GDF-15 expression is also increased and apoptosis is induced by treatment with some COX inhibitors.<sup>6</sup> Peroxisome proliferator-activated receptor- $\gamma$  (PPAR $\gamma$ ) ligands are able to induce GDF-15 expression, indicating the potential use of PPAR ligands for antitumorigenic treatment.<sup>7</sup> With relevance to cardiovascular disease, GDF-15 expression is induced in activated macrophages by oxidized LDL.<sup>8</sup>

Intracellular GDF-15 exists predominantly in its pro-form.<sup>1</sup> The Invitrogen GDF-15 antibody only recognizes the pro-form (non-secreted) of GDF-15.

**REFERENCES**

1. Bootcov MR, et al. *PNAS* 94(21):11514-11519, 1997.
2. Strelau J, et al. *J Neurosci* 20(23):8597-8603, 2000.
3. Bottner M, et al. *Gene* 237(1):105-111, 1999.
4. Moore AG, et al. *J Clin Endocrinol Metab* 85(12):4781-4788, 2000.
5. Baek SJ, et al. *Carcinogenesis* 23(3):425-434, 2002.
6. Baek SJ, et al. *Mol Pharmacol* 59(4):901-908, 2001.
7. Baek SJ, et al. *J Biol Chem* 279(8):6883-6892, 2004.
8. Schlittenhardt D, et al. *Cell Tissue Res* 318(2):325-333, 2004.

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<b>Product</b>	<b>Conjugate</b>	<b>Cat. No.</b>
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rec-Protein G	Sepharose <sup>®</sup> 4B	10-1241

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