

#### DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human GDF-11/GDF-8 in direct ELISAs.                                                                                                                                                                                                                                |
| <b>Source</b>             | Recombinant Monoclonal Mouse IgG <sub>1</sub> Clone # 743835R                                                                                                                                                                                                               |
| <b>Purification</b>       | Protein A or G purified from cell culture supernatant                                                                                                                                                                                                                       |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant human GDF-11/GDF-8<br>Asn299-Ser407<br>Accession # O95390                                                                                                                                                                               |
| <b>Conjugate</b>          | Alexa Fluor 594<br>Excitation Wavelength: 590 nm<br>Emission Wavelength: 617 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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.

|                       |                                                                        |
|-----------------------|------------------------------------------------------------------------|
| <b>Neutralization</b> | Optimal dilution of this antibody should be experimentally determined. |
| <b>ELISA</b>          | Optimal dilution of this antibody should be experimentally determined. |

#### PREPARATION AND STORAGE

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

#### BACKGROUND

Growth Differentiation Factor 11 (GDF-11), also known as BMP-11, is a member of the TGF- $\beta$  superfamily and is highly related to GDF-8. GDF-11 encodes a 407 amino acid (aa) prepropeptide processed into a 109 aa mature protein. Mature GDF-11 contains the canonical 7-cysteine motif common to other TGF- $\beta$  superfamily members; however, like the TGF- $\beta$ s, Activins and GDF-8, GDF-11 also contains one extra pair of cysteine residues. At the amino acid sequence level, mature human, mouse, rat and chicken GDF-11 are 99-100% identical. Mature GDF-11 and GDF-8 share 90% amino acid sequence identity. GDF-11 is expressed in diverse regions of the mouse embryo: tailbud, somitic precursors, limbs, mandibular and branchial arches, dorsal neural tube, odontoblasts, nasal epithelium, and particular regions of the brain (1). GDF-11 signals through the Activin type II receptors and induces phosphorylation of Smad2 to mediate axial patterning (2). Systemic GDF-11 levels decline with age and administration of higher levels of GDF-11 can reverse age-related cardiac hypertrophy (3). In addition, systemic administration of recombinant GDF-11 protein restores genomic integrity and health of muscle stem cells, neurovasculature and enhances neurogenesis (4, 5).

#### PRODUCT SPECIFIC NOTICES

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