

Product Information

Anti-Pro GDF11 antibody produced in rabbit

Affinity isolated antibody

SAB4200865

Product Description

Anti-Pro GDF11 antibody is developed in rabbit using synthetic peptide corresponding to the pro-domain of human GDF11 (GeneID: 10220), conjugated to KLH as immunogen. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Pro GDF11 antibody specifically recognizes Pro GDF11 from human origin. The antibody may be used in various immunochemical techniques including immunoblotting. Detection of the Pro GDF11 band by immunoblotting is specifically inhibited by the immunogen.

GDF11 uses the canonical receptors and the SMAD proteins for signaling. The GDF11 dimer (a disulfide-linked homodimer of carboxy-terminal fragments) binds the activin receptors type II A or B (ActRIIA, ActRIIB), proteins with serine/threonine kinase activity.

Growth Differentiation Factor 11 (GDF11) is expressed in many tissues, including skeletal muscle, pancreas, kidney, nervous system, and retina, among others. GDF11 circulating levels and protein content in tissues are quite variable and are affected by pathological conditions or age.¹ GDF11, also known as Bone Morphogenetic Protein 11 (BMP-11), mRNA is translated in a precursor protein, which is processed by specific proteases generating the mature GDF11 (C-terminal, 12.5 kDa) and the pro-domain (N-terminal, 30.1 kDa). GDF11 shares 89% amino acid sequence homology with GDF8, however GDF8 expression in human tissues is restricted to cardiac and skeletal muscle,² while GDF11 is expressed in all tissues.³ Although there is high homology between mature GDF8 and GDF11, the pro-domains of both proteins share only 54% homology. The pro-domain is fundamental for proper protein folding, disulfide bond formation and exportation of the homodimers,^{4,5} suggesting differences in posttranslational process.

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

This product is for research use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working dilution of 1:500-1:1000 is recommended using rat PC12 cell line.

Note: In order to obtain best results in different techniques and preparations it is recommended to determine optimal working concentration by titration test.

References

1. Simoni-Nieves, Arturo, et al., *Frontiers in oncology*. **9**:1039 (2019).
2. Loffredo FS et al., *Cell*. **153**:828-39 (2013).
3. Uhlen M. et al., *Science*. **347**:1260419 (2015).
4. Gray AM and Mason AJ. *Science*. **247**:1328-30 (1990).
5. Jamaiyar A. et al., *Pharmacol Ther*. **175**:28-34 (2017).

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