

**DESCRIPTION**

<b>Source</b>	Mouse myeloma cell line, NS0-derived human Adiponectin/Acrp30 protein Glu19-Asn244, with a C-terminal 6-His tag Accession # Q15848
<b>N-terminal Sequence Analysis</b>	Glu19
<b>Structure / Form</b>	Oligomer
<b>Predicted Molecular Mass</b>	25.4 kDa

**SPECIFICATIONS**

<b>SDS-PAGE</b>	27-35 kDa, reducing conditions
<b>Activity</b>	Measured by its ability to induce TIMP-1 secretion by mouse macrophages. Kumada, M. <i>et al.</i> (2004) <i>Circulation</i> <b>109</b> :2046. The ED <sub>50</sub> for this effect is 1.20-18.0 µg/mL.
<b>Endotoxin Level</b>	<1.0 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
<b>Formulation</b>	Supplied as a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

**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>	<b>Do not freeze.</b> <ul style="list-style-type: none"> <li>6 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

**BACKGROUND**

Adiponectin, also known as Acrp30, is an adipocyte-derived protein with wide ranging paracrine and endocrine effects on metabolism and inflammation. It is induced during adipocyte differentiation, and its secretion is stimulated by insulin. It promotes adipocyte differentiation, fatty acid catabolism, and insulin sensitivity and is negatively correlated with obesity, type 2 diabetes, and atherogenesis. In this context, Adiponectin is an anti-inflammatory agent, but it exerts pro-inflammatory effects in nonmetabolic disorders such as rheumatoid arthritis and inflammatory bowel disease (1-3). Adiponectin interacts with the receptors AdipoR1 and AdipoR2, calcitriol, and Cadherin-13/T-Cadherin, as well as with several growth factors (4-7). Mature human Adiponectin consists of a 60 amino acid (aa) N-terminal collagenous region and a 137 aa C-terminal C1q-like globular domain which can be cleaved by a leukocyte-derived elastase (8-9). Mature human Adiponectin shares 83% and 85% amino acid (aa) sequence identity with mouse and rat Adiponectin, respectively. Adiponectin associates into trimers that may assemble into medium molecular weight (MMW) hexamers and then into >300 kDa high molecular weight (HMW) oligomers (10-12). The glycosylation of four hydroxylated lysine residues in the collagenous domain is required for the intracellular formation of HMW complexes (13). The various multimeric forms of Adiponectin exhibit distinct tissue specific and gender specific profiles and activities (12, 14).

**References:**

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