

DATASHEET
Version 20181206

Adiponectin, Human

Cat. No.: Z03148-10**Size:** 10.0 ug**Synonyms:** Acrp-30, GBP-28, Apm-1**Description:**

Adiponectin is a hormone mainly produced by adipocytes. Adiponectin forms a homotrimer and exists as higher order multimers *in vivo*. The receptors of Adiponectin are seven-transmembrane G protein coupled receptors: Receptor 1 is expressed in skeletal muscle and Receptor 2 in liver. Adiponectin receives a lot of attention because of its anti-diabetic, anti-atherosclerotic, and anti-inflammatory properties. Adiponectin increases the expression of molecules involved in fatty acid transport, combustion of fatty acid, and energy dissipation, and increases insulin sensitivity of the body. Decreased levels of Adiponectin are associated with hypertension, cardiovascular diseases, and metabolic syndromes. Therefore, Adiponectin has promising potential as a pharmacological agent.

Recombinant human Adiponectin (rhAdiponectin) produced in *E. coli* is a single non-glycosylated polypeptide chain containing 227 amino acids. A fully biologically active molecule, rhAdiponectin has a molecular mass of 24.7 kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques at GenScript.

Amino Acid Sequence:

```
00001 METTTQGPV LLPLPKGACT GWMAGIPGHP GHNGAPGRDG
00041 RDGTPGEKGE KGDPLIGPK GDIGETGVPG AEGPRGFPGI
00081 QGRKGEPGEG AYVYRSFVSV GLETVTIPN MPIRFTKIFY
00121 NQQNHYDGST GKFCNIPGL YYFAYHITVY MKDKVSLFK
00161 KDKAMLFYTD QYQENNVDA SGSVLLHLEV GDQVWLQVYG
00201 EGERNGLYAD NDNDSTFTGF LLYHDTN
```

Source: *E. coli***Species:** Human**Biological Activity:** ED₅₀ < 5 µg/mL, measured by a cell growth inhibitory assay using M1 cells, corresponding to a specific activity of > 2 × 10² units/mg.**Molecular Weight:** 24.7 kDa, observed by reducing SDS-PAGE.**Formulation:** Lyophilized after extensive dialysis against 50 mM Tris, 150 mM NaCl, pH8.0.**Reconstitution:** Reconstituted in ddH₂O at 100 µg/mL.**Purity:** > 95% as analyzed by SDS-PAGE and HPLC.**Endotoxin Level:** < 0.2 EU/µg, determined by LAL method.**Storage:** Lyophilized recombinant human Adiponectin (rhAdiponectin) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rhAdiponectin remains stable up to 2 weeks at 4°C or up to 3 months at -20°C.