

Recombinant Human Adiponectin Globular

Alternate names:	IFN alpha, Interferone alpha
Catalog No.:	PA1040X
Quantity:	10 µg
Concentration:	0.6 mg/ml
Background:	Adiponectin (also called ACRP30 and GBP28) is a protein exclusively secreted from adipose tissue. In the circulation, adiponectin is present as three different oligomeric complexes, including the high molecular weight (HMW), the middle molecular weight (MMW, also called hexamer) and low molecular weight (LMW, also called trimer) forms. Different oligomeric complex of adiponectin activates different signaling pathways and exerts distinct functions.
Species:	Human
Source:	E. coli, E.coli.
Format:	State: Sterile Filtered White lyophilized (freeze-dried) powder. Purity: >98% Greater than 98% as determined by HPLC and SDS PAGE. Buffer System: Sterile filtered and lyophilized from PBS buffer. Reconstitution: Add 0.2 ml of deionized water and let the lyophilized pellet dissolve completely.
Description:	Total 170AA. N-terminal underlined amino acids are His-tag and the protease cleavage site (31AA). The AA sequence is homologous to the 105-244 amino acid sequence of the Human full-length Adiponectin. AA Sequence: MSWVHHHHHH NWNIPPTQDT TQDLWFEGAM GEGAYVYRS FSVGLETYV TIPNMPIRFT KIFYNQQNHVDGSGTGKPFHCN IPGLYYFAYH ITVYMKDVKV SLFKKDKAML FTYDQYQENN VDQASGSVLL HEVGDQVWLQVYGEGERNGL YADNDNDSTF TGFLLYHDTN (Swiss-prot entry Q15848) Applications: ELISA, Western blotting, cell culture and/or animal studies Other applications not tested. Optimal dilutions are dependent of conditions and should be determined by the user. Molecular weight: 59 kDa
Storage:	For long term, store lyophilized protein at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after two weeks at 4°C. The lyophilized protein remains stable for 24 months when stored at -20°C.
General Readings:	1. Waki H, Yamauchi T, Kamon J, Kita S, Ito Y, Hada Y, et al. Generation of globular fragment of adiponectin by leukocyte elastase secreted by monocytic cell line THP-1. <i>Endocrinology</i> . 2005 Feb;146(2):790-6. Epub 2004 Nov 4. PubMed PMID: 15528304. 2. Xu A, Wang Y, Keshaw H, Xu LY, Lam KS, Cooper GJ. The fat-derived hormone adiponectin alleviates alcoholic and nonalcoholic fatty liver diseases in mice. <i>J Clin Invest</i> . 2003

Jul;112(1):91-100. PubMed PMID: 12840063.

3. Pajvani UB, Du X, Combs TP, Berg AH, Rajala MW, Schulthess T, et al. Structure-function studies of the adipocyte-secreted hormone Acrp30/adiponectin. Implications for metabolic regulation and bioactivity. *J Biol Chem*. 2003 Mar 14;278(11):9073-85. Epub 2002 Dec 20. PubMed PMID: 12496257.

4. Wang Y, Xu A, Knight C, Xu LY, Cooper GJ. Hydroxylation and glycosylation of the four conserved lysine residues in the collagenous domain of adiponectin. Potential role in the modulation of its insulin-sensitizing activity. *J Biol Chem*. 2002 May 31;277(22):19521-9. Epub 2002 Mar 23. PubMed PMID: 11912203.

5. Yamauchi T, Kamon J, Minokoshi Y, Ito Y, Waki H, Uchida S, et al. Adiponectin stimulates glucose utilization and fatty-acid oxidation by activating AMP-activated protein kinase. *Nat Med*. 2002 Nov;8(11):1288-95. Epub 2002 Oct 7. PubMed PMID: 12368907.