Cytokines

Human Recombinant Omentin

Omentin

Catalog #100-1325

100 µg

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Product Description

Omentin, also known as intelectin-1, is an adipokine preferentially produced by visceral adipose tissue but also expressed in the small intestine, colon, mesothelial cells, vascular cells, and plasma (Watanabe et al.). Protein sequence analysis shows omentin comprises 313 amino acids, with a secretory signal sequence and fibrinogen-related domain (Yang et al.). Omentin plays a key role in the maintenance of insulin sensitivity and body metabolism, with studies showing decreasing levels of this adipokine being associated with obesity, insulin resistance, and diabetes (Tan et al.). Omentin may also have protective effects against atherosclerosis, arterial calcification, and myocardial injury through AMP-activated protein kinase (AMPK) and Akt-dependent mechanisms (Xu et al., Kataoka et al.). Through regulation of Sirt1-dependent p53 deacetylation, omentin can inhibit proliferation and induce apoptosis in hepatocellular carcinoma cells (Zhang and Zhou).

Product Information

Alternative Names:	Intelectin-1, ITLN-1
Accession Number:	Q8WWA0
Amino Acid Sequence:	MNQLSFLLFL IATTRGWSTD EANTYFKEWT CSSSPSLPRS CKEIKDECPS AFDGLYFLRT ENGVIYQTFC DMTSGGGGWT LVASVHENDM RGKCTVGDRW SSQQGSKAVY PEGDGNWANY NTFGSAEAAT SDDYKNPGYY DIQAKDLGIW HVPNKSPMQH WRNSSLLRYR TDTGFLQTLG HNLFGIYQKY PVKYGEGKCW TDNGPVIPVV YDFGDAQKTA SYYSPYGQRE FTAGFVQFRV FNNERAANAL CAGMRVTGCN TEHHCIGGGG YFPEASPQQC GDFSGFDWSG YGTHVGYSSS REITEAAVLL FYR
Predicted Molecular Mass:	35 kDa
Species:	Human
Formulation:	Lyophilized from a sterile aqueous solution containing 10 mM sodium phosphate and 5:1 mannitol to protein, pH 7.5.
Source:	*E.coli*

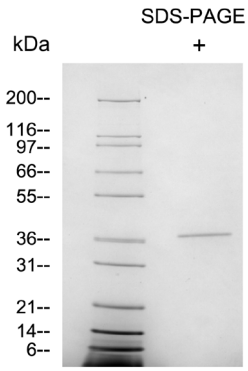
Specifications

Activity:	Not available
Purity:	≥ 90%
Endotoxin Level:	Measured by kinetic Limulus amebocyte lysate (LAL) analysis and is ≤ 5 EU/µg protein.

Preparation and Storage

Storage:	Store at -20 to -80°C.
Stability:	Stable as supplied for 12 months from date of receipt.
Preparation:	Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. As a general guide, do not store at 2 - 8°C for more than 1 month or at -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.

Data



Human Recombinant Omentin was resolved with SDS-PAGE under reducing (+) conditions and visualized by Coomassie Blue staining. Human Recombinant Omentin has a predicted molecular mass of 35 kDa.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines, or contact us at techsupport@stemcell.com.

References

Kataoka Y et al. (2014) Omentin prevents myocardial ischemic injury through AMP-activated protein kinase- and Akt-dependent mechanisms. J Am Coll Cardiol 63(24): 2722–33.

Tan BK et al. (2010) Omentin: a novel link between inflammation, diabesity, and cardiovascular disease. Trends Cardiovasc Med 20(5): 143–8.

Watanabe T et al. (2017) Adipose tissue-derived omentin-1 function and regulation. Compr Physiol 7(3): 765–81.

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Yang RZ et al. (2006) Identification of omentin as a novel depot-specific adipokine in human adipose tissue: possible role in modulating insulin action. Am J Physiol Endocrinol Metab 290(6): 1253–61.

Zhang YY & Zhou LM. (2013) Omentin-1, a new adipokine, promotes apoptosis through regulating Sirt1-dependent p53 deacetylation in hepatocellular carcinoma cells. Eur J Pharmacol 698(1–3): 137–44.