

Datasheet for ABIN7566393

FNDC5 Protein (AA 29-140, AA 32-143, Monomer) (Fc Tag)



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Overview

Quantity:	50 µg
Target:	FNDC5
Protein Characteristics:	AA 29-140, AA 32-143, Monomer
Origin:	Human, Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This FNDC5 protein is labelled with Fc Tag.

Product Details

Purpose:	Fc (LALA-PG)-KIH (human):Irisin (monomeric) (rec.)
Cross-Reactivity:	Human, Monkey, Mouse, Rat
Characteristics:	Fc (LALA-PG) Knobs:Irisin (human, aa 32-143 /mouse, aa 29-140) and Fc (LALA-PG) Holes form the Fc (LALA-PG)-KIH (human):Irisin (monomeric) (rec.) using the Knobs-into-Holes technology (see reference: J.B. Ridgway, et al., Protein Eng. 9, 617 (1996)).
Purity:	>95 % (SDS-PAGE)
Endotoxin Level:	<0.01EU/µg purified protein (LAL test).

Target Details

Target:	FNDC5
Alternative Name:	Irisin (FNDC5 Products)

Target Details

Background:	<p>Fc (LALA-PG)-KIH (human):Fibronectin Type III Domain-containing Protein 5 (cleaved), Fibronectin Type III Repeat-containing Protein 2 (cleaved), FNDC5 (cleaved)</p> <p>Irisin is a recently described exercise-induced hormone secreted by skeletal muscle in mice and humans. Irisin activates beige fat cells (beige cells have a gene expression pattern distinct from either white or brown fat and are preferentially sensitive to the polypeptide hormone Irisin). Irisin is cleaved from the type I membrane protein FNDC5 and improves systemic metabolism by increasing energy expenditure. Upon exercise, FNDC5 expressed by skeletal muscles is proteolytically processed and secreted as the myokine Irisin, which has several functions: i) it contributes to the conversion of white fat to higher oxygen consumable brown fat (also called beige fat) in response to exercise, ii) it regulates bone mineral density and bones remodeling, and iii) it increases synaptic plasticity and rescues memory and cognitive function of the brain in mouse models of Alzheimer's disease. Irisin not only plays a vital role in energy metabolism but also has crucial roles in a variety of processes such as inflammation, proliferation, metastasis, aging and neural differentiation. The protein Fc (LALA-PG)-KIH (human):Irisin (monomeric) (rec.) is produced by using two different vectors, one encoding for the Fc Knobs (LALA-PG) (human):Irisin sequence (synthesizing a protein of 55 kDa) and one encoding for the Fc Holes (LALA-PG) sequence (synthesizing a protein of 30 kDa). Both vectors transfected into HEK293 cells produce both Fc molecules (Knobs-into-Holes technology, J.B. Ridgway, et al., Protein Eng. 9, 617 (1996)) required for dimerization and for secretion of the final protein Fc (LALA-PG)-KIH (human):Irisin (monomeric) (rec.). The Fc contains the mutations LALA-PG that abolish the interaction between the Fc and FcγRs and therefore Fc undesirable effects. InVivoKines™ are a new generation of recombinant fusion proteins for immunotherapeutic, preclinical and translational in vivo research</p>
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Molecular Weight:	~55kDa and 30 kDa (SDS-PAGE)
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UniProt:	Q8NAU1
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Pathways:	Hormone Activity , Brown Fat Cell Differentiation , Positive Regulation of fat Cell Differentiation
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Application Details

Restrictions:	For Research Use only
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Handling

Format:	Lyophilized
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Reconstitution:	1 mg/mL after reconstitution.
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Handling

Concentration:	1 mg/mL
Buffer:	Contains PBS
Handling Advice:	After reconstitution, prepare aliquots and store at -20 °C. Avoid freeze/thaw cycles.Centrifuge lyophilized vial before opening and reconstitution. PBS containing at least 0.1 % BSA should be used for further dilutions.
Storage:	4 °C,-20 °C
Storage Comment:	Short Term Storage: +4°C Long Term Storage: -20°C Use & Stability: Stable for at least 6 months after receipt when stored at -20°C.Working aliquots are stable for up to 3 months when stored at -20°C.