

Irisin, Active, human recombinant

CATALOG #:	7852-10	10 µg
	7852-50	50 µg
ALTERNATE NAMES:	Fibronectin Type III Domain-containing Protein 5, FNDC5 (cleaved); Fibronectin Type III Repeat-containing Protein 2, FRCP2 (cleaved).	
SOURCE:	<i>E. coli</i>	
SEQUENCE:	Full-length untagged Irisin (112 amino acids). Irisin has 100% identity between mouse, rat, monkey and human.	
PURITY:	≥95% by SDS-PAGE	
MOL. WEIGHT:	~13.00 kDa (SDS-PAGE)	
FORMULATION:	Lyophilized from PBS.	
RECONSTITUTION:	Reconstitute to 0.1 mg/ml with sterile water	
ENDOTOXIN CONTENT:	<0.1 EU/µg purified protein by LAL testing	
STORAGE CONDITIONS:	Store lyophilized product and aliquots after reconstitution at -20°C. Avoid repeated freeze thaw cycles. Stable for at least 6 months after receipt.	

DESCRIPTION: Irisin is a recently discovered exercise-induced myokine, which is secreted by skeletal muscles and produced by cleavage of the FNDC5. Studies show that Irisin stimulates mitochondria uncoupling protein-1 (UCP-1; a regulator of thermogenic capability of brown fat) expression, so Irisin can upregulate white to brown fat conversion and improve systemic metabolism by increasing energy expenditure. Hence, Irisin is a potential new drug target in the study of metabolic disorders, such as obesity and type 2 diabetes mellitus (T2DM). Moreover, FNDC5-like receptors are conserved in vertebrates and critical for neuronal development.

FOR RESEARCH USE ONLY! Not to be used on humans.

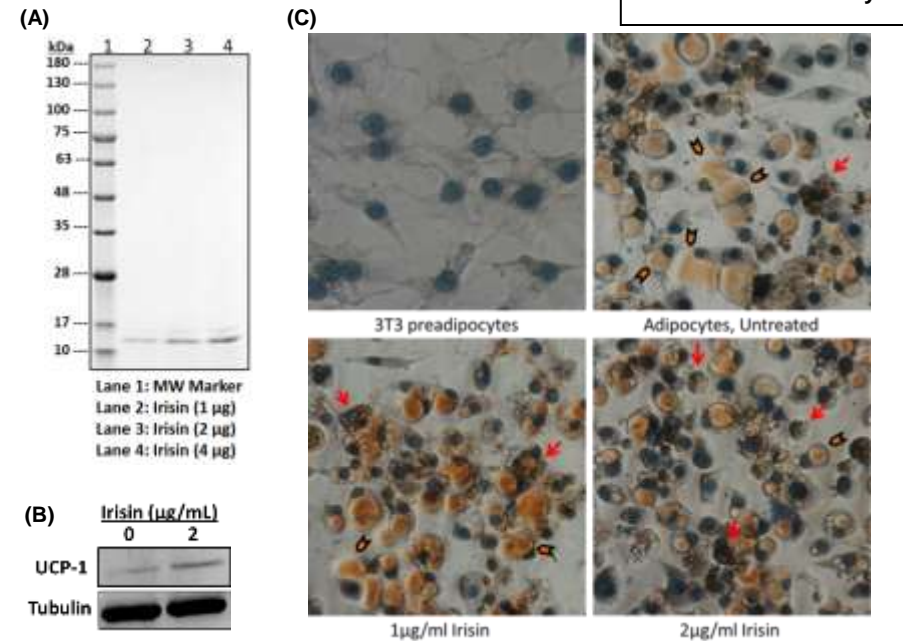


Figure: (A) SDS-PAGE (4-20%) of Recombinant Human Irisin: Recombinant Irisin Protein loaded under reducing conditions and stained with Coomassie Blue. The protein has a predicted MW of ~ 13.00 kDa. **(B-C) Irisin treatment stimulates UCP-1 expression in 3T3-L1 derived adipocyte.** Mouse 3T3 cells were differentiated to 3T3-L1 adipocytes using BioVision's 3T3-L1 Differentiation Kit (Cat. No. K579-100), and then incubated with active Irisin (2 µg/ml) for 5 days. Protein expressions of untreated and Irisin-treated cells were determined by (B) Western blotting (UCP-1 antibody, 1:250, Cat. No. 6637-50; Tubulin antibody, 1:500, Cat. No. 3708-100) and (C) Immunocytochemistry and lipid (Oil Red O) staining. The staining shows that active recombinant Irisin upregulated both UCP1 expression and white to brown fat conversion in mature 3T3-L1 adipocytes (active Irisin, 1~2 µg/ml; red arrow: UCP-1; orange chevron: neutral lipids within cells. Cells were counterstained with Hematoxylin using BioVision's Ready-to Use IHC/ICC kit, Cat. No. K405-50 and Lipid (Oil Red O) Staining Kit, Cat. No. K580-24.

RELATED PRODUCTS:

- Irisin Competitive ELISA Kit (Cat. No. K4761-100)
- Irisin Antibody (Cat. No. 6286-50)
- UCP-1 antibody (Cat. No. 6637-50)
- Tubulin antibody (Cat. No. 3708-100)
- 3T3-L1 Differentiation Kit (Cat. No. K579-100)
- Cell Lysis Buffer (Cat. No. 1067-100)
- ECL Western Blotting Substrate Kit (Cat. No. K820-50)
- Ready-to Use IHC/ICC kit (Cat. No. K405-50)
- Lipid (Oil Red O) Staining Kit (Cat. No. K580-24)