

PRODUCT INFORMATION



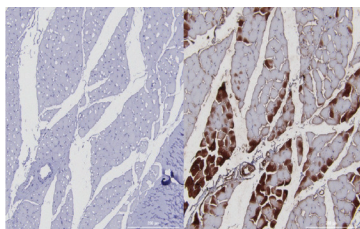
Irisin Polyclonal Antibody

Item No. 14625

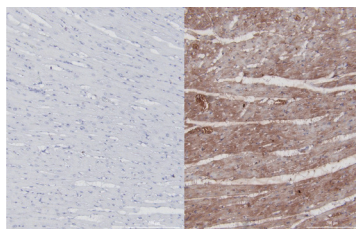
Overview and Properties

Contents:	This vial contains protein A-purified polyclonal antibody.
Synonyms:	Fibronectin type III domain-containing protein 5, FNDC5, FRCP2, PeP
Immunogen:	Human Irisin (FNDC5 amino acids 32-143)
Species Reactivity:	(+) Human; other species not tested
Uniprot No.:	Q8NAU1
Form:	Lyophilized
Storage:	-20°C (as supplied)
Stability:	≥3 years
Storage Buffer:	TBS, pH 7.4 when reconstituted in 500 µl deionized water
Host:	Rabbit
Applications:	ELISA, Immunohistochemistry (IHC), and Western blot (WB); the recommended starting dilution is 1:500-1:2,000 for ELISA, 1:100 for IHC, and 1:200 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

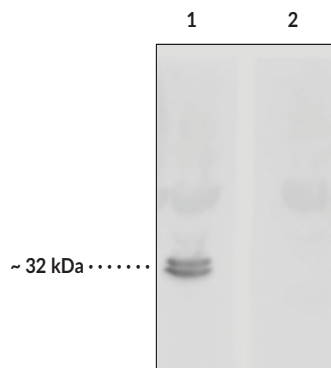
Images



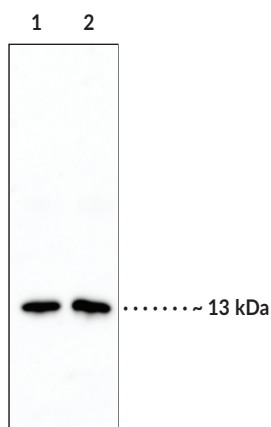
Immunohistochemical staining of formalin-fixed, paraffin-embedded (FFPE) human skeletal muscle tissue after heat-induced antigen retrieval in citrate buffer, pH 6.0, after incubation with Irisin Polyclonal Antibody (Item No. 14625) at a 1:100 dilution (left panel, secondary alone).



Immunohistochemical staining of formalin-fixed, paraffin-embedded (FFPE) rat heart tissue after heat-induced antigen retrieval in citrate buffer, pH 6.0, after incubation with Irisin Polyclonal Antibody (Item No. 14625) at a 1:100 dilution (left panel, secondary alone).



Lane 1: Deglycosylated human serum probed with Irisin Polyclonal Antibody (15 µg)
Lane 2: Deglycosylated human serum probed with pre-immune serum (15 µg)



Lane 1: Irisin (human, recombinant) (25 ng)
Lane 2: Irisin (human, recombinant) (50 ng)

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Physical exertion and exercise are the primary defenses against obesity, insulin resistance, and diabetes. The transcriptional co-activator peroxisome proliferator-activated receptor C coactivator 1 α (PGC-1 α), regulates mitochondrial biogenesis and function. Expression of the membrane protein fibronectin type III domain-containing protein 5 (FNDC5) is stimulated in muscle by increased expression of the PGC1- α protein in response to exercise. FNDC5 is proteolytically cleaved and secreted as the hormone peptide irisin (named after the Greek goddess messenger Iris). Irisin has been shown to convert white adipose tissue (WAT) to brown adipose tissue (BAT).¹ An increase in BAT results in anti-obesity and anti-diabetic metabolic states in mice. Exogenous irisin levels in mice leads to higher levels of the uncoupling protein UCP1, which results in an increase in thermogenesis and heat expenditure.² The physiological responses induced by the effects of irisin have the potential to increase weight loss and reduce insulin resistance and metabolic disorder. Cayman's irisin polyclonal antibody detects a 13 kDa band from bacterially expressed irisin protein (Item No. 11451), and a 32 kDa band from deglycosylated human serum.

References

1. Boström, P., Wu, J., Jedrychowski, M.P., *et al.* A PGC1- α -dependent myokine that drives brown-fat-like development of white fat and thermogenesis. *Nature* **481**, 463-468 (2012).
2. Wu, J., Boström, P., Sparks, L.M., *et al.* Beige adipocytes are a distinct type of thermogenic fat cell in mouse and human. *Cell* **150**, 366-376 (2012).

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