

PRODUCT INFORMATION



Irisin (human, recombinant)

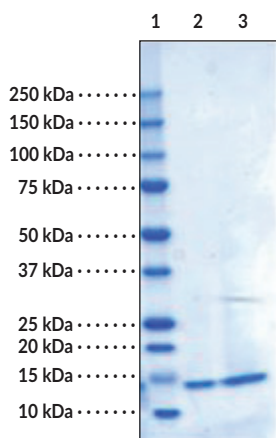
Item No. 11451

Overview and Properties

Synonyms: Fibronectin Type III Domain 5, FNDC5, FRCP2, PeP
Source: Recombinant protein expressed in *E. coli*. An N-terminal hexahistidine-tag and SUMOpro tag were removed by cleavage with SUMO protease 1 (Ulp1). *SUMOpro tag was used under non-exclusive license from LifeSensors, Inc. www.lifesensors.com*
Amino Acids: 1-111 (full-length, amino acids 32-143 of FNDC5)
Uniprot No.: Q8NAU1
Molecular Weight: 12.4 kDa
Storage: -80°C (as supplied); avoid freeze/thaw cycles by aliquoting protein
Stability: ≥1 year
Purity: ≥85% estimated by SDS-PAGE
Supplied in: 50 mM Tris pH 8.0, 150 mM sodium chloride, and 20% glycerol
Protein Concentration: *batch specific* mg/ml
Additional Information: This protein has not been tested for enzyme activity. Protein was sterile filtered and aliquoted into sterile tubes.

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: Irisin (2 µg)
Lane 3: Irisin (5 µg)

Representative gel image shown; actual purity may vary between each batch.

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.¹ Expression of the membrane protein Fibronectin type III domain-containing protein 5 (FNDC5) is stimulated in muscle by PGC-1 α 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 fat to brown adipose fat upon physical exertion. Brown adipose fat allows for mitochondrial uncoupling leading to thermogenetic programs 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 obesity.

References

1. Kelly, D.P. Irisin, light my fire. *Science* **336**, 42-43 (2012).
2. 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).

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