

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Irisin/FNDC5 in direct ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 936410
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Irisin/FNDC5 Asp32-Glu143 Accession # Q8NAU1
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

ELISA Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Irisin (also known as FNDC5) is a 12 kDa glycosylated polypeptide hormone that regulates energy metabolism, stem cell differentiation, and neuronal development (1, 2). Human Irisin is synthesized as a 212 amino acid (aa) precursor encoding a type 1 transmembrane protein with a 121 aa extracellular domain (ECD), a 21 aa transmembrane domain, and a 39 aa cytoplasmic domain. The ECD of Irisin contains a fibronectin type III domain and multiple glycosylation sites. The ECD is proteolytically cleaved to release the 112 aa soluble Irisin hormone into circulation (2-5). Mature human, mouse, and rat Irisin share 100% sequence identity. Expression of Irisin is induced in skeletal muscle and subcutaneous adipose tissue during and shortly after exercise (2, 6). Irisin induces expression of peroxisome proliferator-activated receptor γ co-activator 1 α (PGC1 α) and uncoupling protein-1 (UCP1), mitochondrial-associated metabolic proteins (7, 8). Irisin induces the transition of white adipose tissue into more metabolically active beige adipose tissue. In mice, expression of Irisin has been shown to regulate obesity and diabetes (1, 2). A similar function in humans is suggested (9). Irisin also regulates neuronal cell differentiation and neurite outgrowth in the brain and is involved in the differentiation of osteoblasts (10-14).

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