Recombinant Protein Technical Manual

Recombinant Human/Mouse/Rat Irisin/FNDC5 Protein (His Tag)

RPES3660

Product Data:

Product SKU: RPES3660

Size: 10µg

Species: Human/Mouse/Rat

Expression host: Human Cells

Uniprot: Q8NAU1

Protein Information:

Molecular Mass: 13.6 kDa

AP Molecular Mass: 20-28 kDa

Tag: C-His

Bio-activity:

Purity: > 95% as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Lyophilized protein should be stored at < -20°C, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 4-7°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from a 0.2 µm filtered solution of PBS, pH7.4.

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: Fibronectin type III domain-containing protein 5; Fibronectin type III repeat-containing protein 2; Irisin; FNDC5

Immunogen Information:

Sequence: Asp32-Glu143

Background:

Fibronectin type III domain-containing protein 5, the precursor of irisin, is a protein that is encoded by the FNDC5 gene. 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. Mature human, mouse share 100% sequence identity. Irisin induces expression of peroxisome proliferatoractivated receptor γ coactivator 1α (PGC1α) and uncoupling protein1(UCP1), mitochondrialassociated metabolic proteins. Irisin induces the transition of white adipose tissue into more metabolically active beige adipose tissue. Irisin also regulates neuronal cell differentiation and neurite outgrowth in the brain and is involved in the differentiation of osteoblasts.