

For Research Use Only

NRAC Recombinant monoclonal antibody

Catalog Number: 87528-1-RR



Basic Information

Catalog Number: 87528-1-RR	GenBank Accession Number: NM_001008404.2	Purification Method: Protein A purification
Source: Rabbit	GeneID (NCBI): 400258	CloneNo.: 252953C8
Isotype: IgG	UNIPROT ID: Q8N912	Recommended Dilutions: WB: 1:1000-1:4000
Immunogen Catalog Number: EG6025	Full Name: chromosome 14 open reading frame 180	
	Calculated MW: 18 kDa	
	Observed MW: 18 kDa	

Applications

Tested Applications: WB, ELISA	Positive Controls: WB : human heart tissue,
Species Specificity: human	

Background Information

NRAC (Nutritionally Regulated Adipose and Cardiac enriched protein, with the human homologous gene designated as C14ORF180) is a recently identified adipocyte-specific double-pass transmembrane protein. Both its N- and C-termini are located intracellularly, containing only a short extracellular loop and no known enzymatic domains. Its expression is significantly induced during the differentiation of white and brown adipocytes and is regulated by nutritional status: fasting and obesity both downregulate its mRNA levels, suggesting its role as a "fat sensor" in energy homeostasis. Mechanistically, NRAC forms a trimeric complex via its first transmembrane domain with the fatty acid transporter core protein CD36 and the membrane microdomain protein caveolin-1. When extracellular fatty acid concentrations increase, NRAC undergoes ubiquitination and internalization, causing CD36 to dissociate from caveolin-1 and switch to clathrin-mediated endocytosis. This process enhances fatty acid uptake, leading to adipocyte hypertrophy and increased overall adipose mass.

Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol, pH7.3
Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:

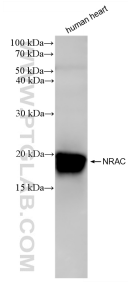
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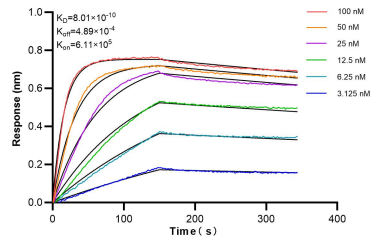
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Selected Validation Data



human heart tissue were subjected to SDS PAGE followed by western blot with 87528-1-RR (NRAC antibody) at dilution of 1:2000 incubated at room temperature for 1.5 hours.



Biolayer interferometry (BLI) kinetic assays of 87528-1-RR against Human NRAC were performed. The affinity constant is 0.801 nM.