



Ob-R (541-840): sc-4365 WB

BACKGROUND

Although there is substantial evidence that body weight is physiologically regulated, the molecular basis of obesity is unknown. Five single-gene mutations in mice that result in an obese phenotype have been identified. The first such recessive obesity mutation, the obese mutation (*ob*), was identified in 1950. Mutation of *ob* results in profound obesity and type II diabetes as part of a syndrome that resembles morbid obesity in humans. It has been postulated that the *ob* gene product may function as a component of a signaling pathway in adipose tissue that functions to regulate body fat depot size. The cloning and sequence analysis of the mouse *ob* gene and its human homolog has recently been described. *ob* encodes a 4.5 kDa, adipose tissue-specific mRNA with a highly conserved 167 amino acid open reading frame. The predicted amino acid sequence is 84% identical between human and mouse and has the features of a secreted protein. A nonsense mutation in codon 105 has been found in the original congenic C57BL/6J *ob/ob* mouse strain. The *ob* gene encodes the protein leptin. The leptin receptor, designated Ob-R, has been shown to be a single membrane-spanning receptor that most resembles the gp130 signal transducing component of the IL-6, G-CSF and LIF receptor. Ob-R mRNA is expressed in the choroid plexus and hypothalamus.

REFERENCES

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SOURCE

Ob-R (541-840) is expressed in *E. coli* as a 60 kDa tagged fusion protein corresponding to amino acids 541-840 of short and long forms of Ob-R of human origin.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

PRODUCT

Ob-R (541-840) is purified from bacterial lysates (> 98%) by column chromatography; supplied as 10 µg in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

Ob-R (541-840) is suitable as a Western blotting control for sc-8325.

SELECT PRODUCT CITATIONS

1. Caprio, M., Fabbrini, E., Ricci, G., Basciani, S., Gnessi, L., Arizzi, M., Carta, A.R., De Martino, M.U., Isidori, A.M., Frajese, G.V. and Fabbri, A. 2003. Ontogenesis of leptin receptor in rat Leydig cells. *Biol. Reprod.* 68: 1199-1207.

RESEARCH USE

For research use only, not for use in diagnostic procedures.