



Supplementary Materials

Expression of Endogenous Putative TSH Binding Protein in Orbit

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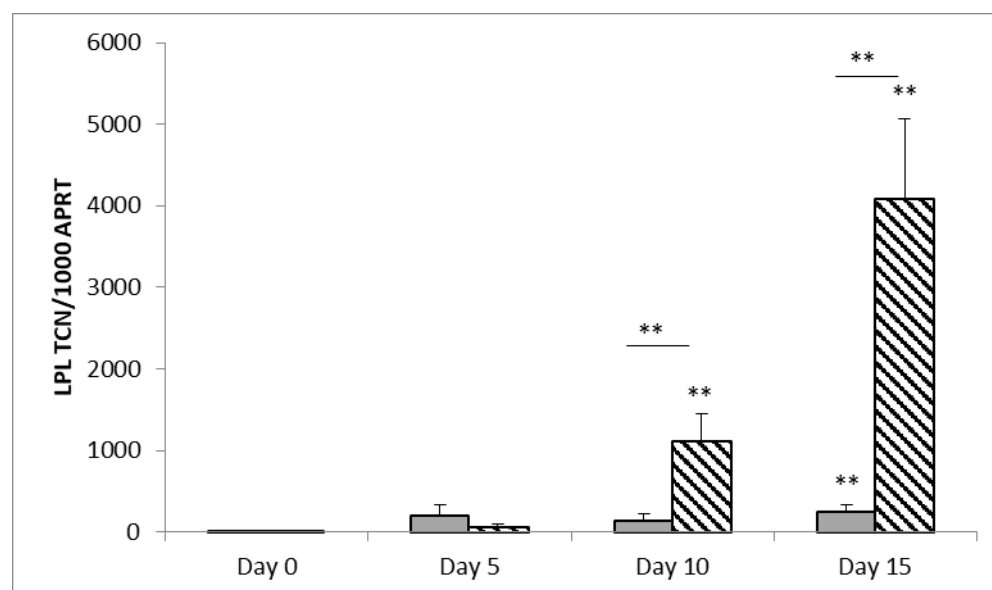
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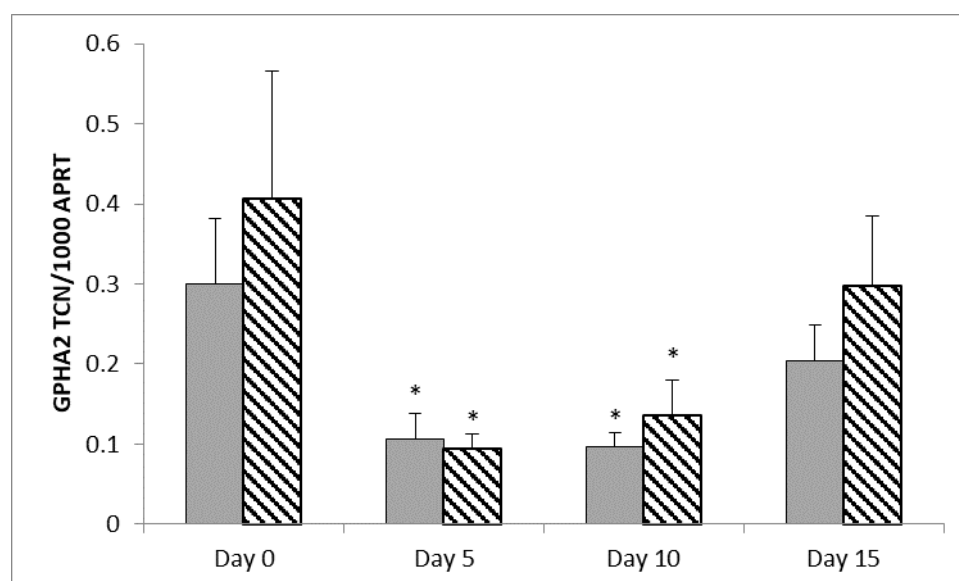
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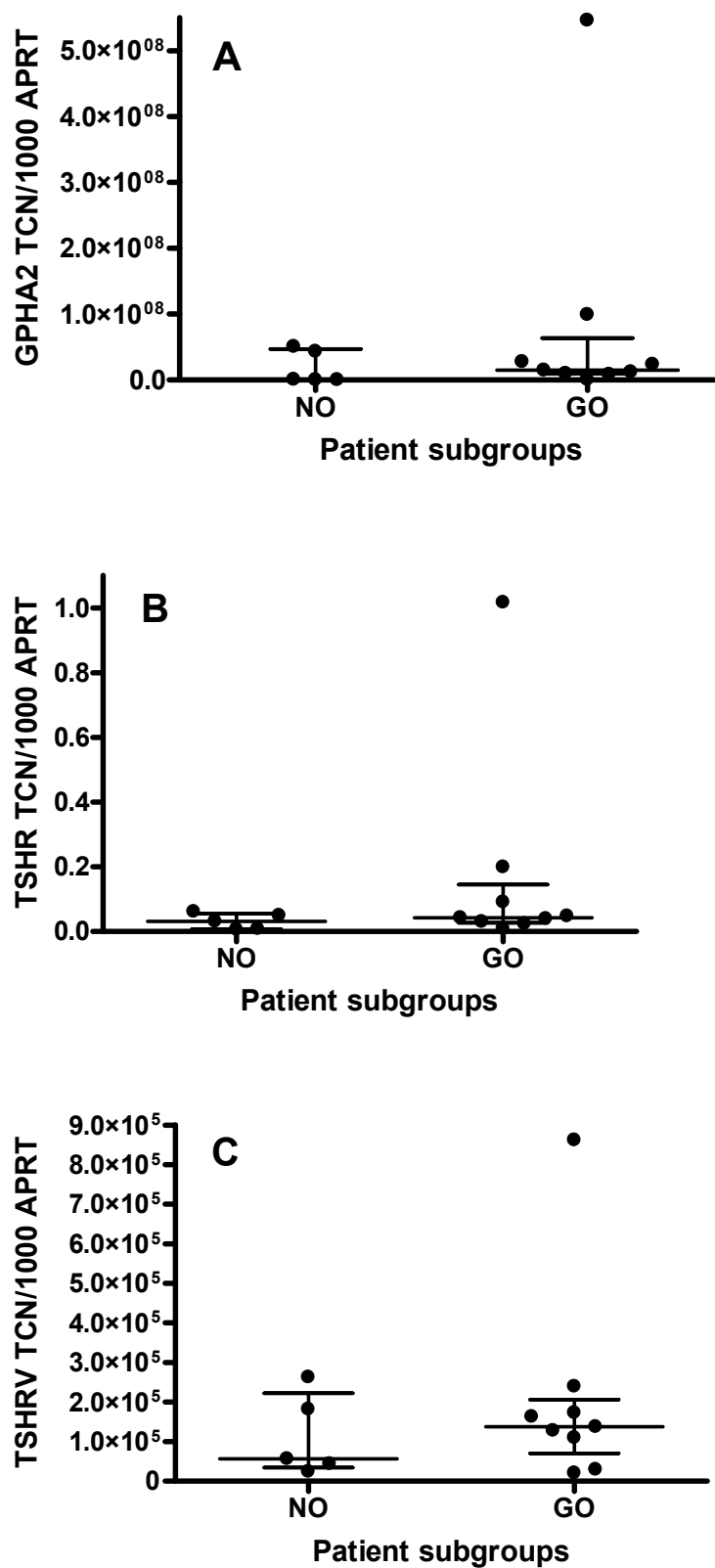
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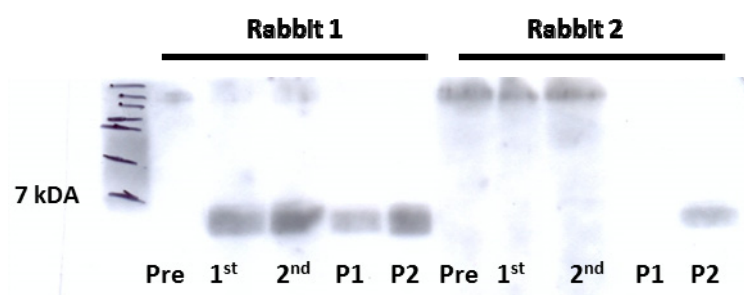
Supplementary Figure S1. Marker of adipogenesis Lipoprotein lipase (*LPL*) transcripts were measured in orbital preadipocyte-fibroblasts (OF) from patients with Graves' orbitopathy (GO) (Stippled bar, $n = 5$) and non-GO (grey bar, $n = 5$) at various time points at baseline (Day 0) and during adipogenesis (Day 5, 10, 15). Results are presented as *LPL* transcript copy number per 1000 copies of the housekeeper *APRT*. Results are expressed as mean \pm SEM; ** p -value < 0.01 compared to day 0 on each respective day; horizontal bar represent comparison between non-GO and GO.



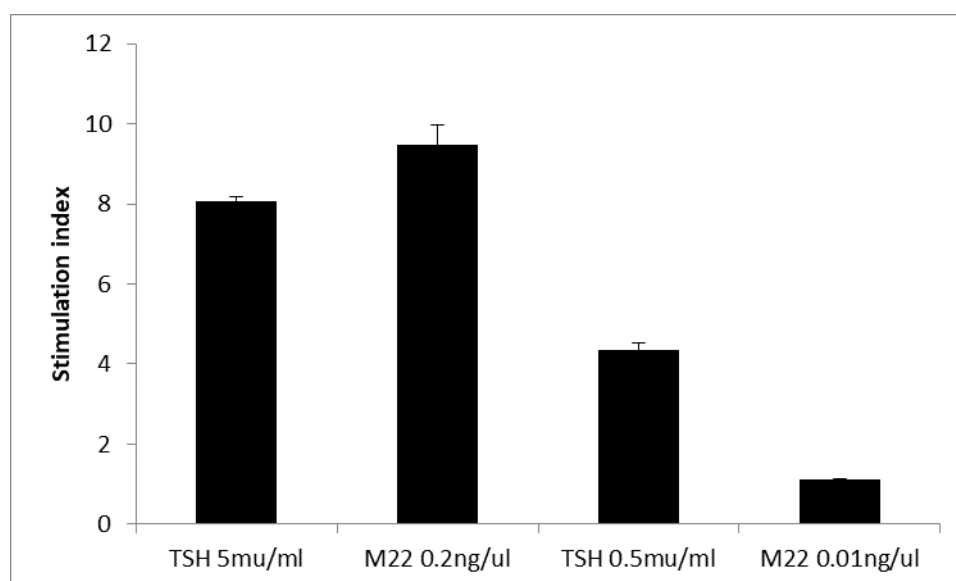
Supplementary Figure S2. Transcripts for the *thyrostimulin* $\alpha 2$ subunit were measured in OF from patients with GO (Stippled bar, $n = 5$) and non-GO (grey bar, $n = 5$) at various time points before (Day 0) and during adipogenesis (Day 5, 10, 15). Results are expressed as transcript copy number of $\alpha 2$ per 1000 copies of the housekeeper *APRT*. Results are presented as mean \pm SEM; * p -value < 0.05 for days 5, 10, 15 compared to equivalent day 0 for GO or non-GO.



Supplementary Figure S3. Ex vivo analysis of orbital adipose tissue from non-GO individuals (NO, $n = 5$) and patients with GO ($n = 9$) for transcripts of A, *thyrostimulin* $\alpha 2$ subunit; B, *TSHR*; C, the *TSHRV*. Results are expressed as transcript copy number per 1000 copies of the housekeeper *APRT*. Results are presented as median \pm interquartile range.



Supplementary Figure S4. Successful generation of antibody to unique TSHRv peptide.



Supplementary Figure S5. Luminescent bioassay to measure cAMP following TSHR activation. Stimulation index in the presence of varying doses of TSH and monoclonal TSAB M22.