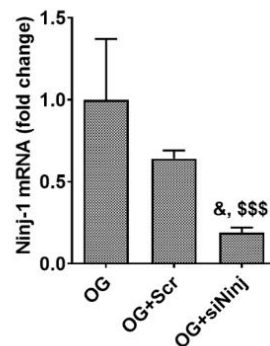


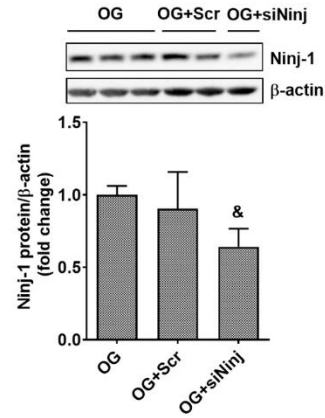
**Figure S1.** Oscillating glucose more than constant high glucose increases p22phox in EC. Cells were exposed to 5 mM glucose (NG), 25 mM glucose (HG) or alternatively to 5 mM/25 mM glucose (OG) at every 3 h, for 72 h. Cells exposed alternatively to L-glucose or mannitol (using the same protocol as for OG) were considered osmotic control (OC). (a) p22phox mRNA; (b) p22phox protein expression relative to β-actin (representative blot and densitometric analysis). All data are expressed as fold change versus NG and presented as mean ± SD. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$  vs NG; # $p < 0.05$  vs HG.



**Figure S2.** Ninj-1 gene expression levels after specific silencing, in EC from EA.hy926 line exposed to oscillating glucose. Cells were transfected with specific siRNA for Ninj-1 (siNinj) or a scrambled siRNA (Scr). At 24 h after transfection, cells were exposed alternatively to 5 mM/25 mM glucose (OG) at every 3 h, for 72 h. Data are expressed as fold change versus OG and presented as mean ± SD. & $p < 0.05$  vs OG; \$\$\$ $p < 0.001$  vs OG+Scr.

**Table S1. Primer sequences used for gene expression analysis by Real-Time PCR**

| Gene                          | GeneBank<br>accession<br>number   | Sequences of oligonucleotide primers                                   | Amplicon<br>size<br>(bp) |
|-------------------------------|-----------------------------------|--|--------------------------|
| <i>NINJ-1</i>                 | NM_004148.3                       | FW: 5'-TCAAGTACGACCTTAACAACCCG-3'<br>RV: 5'-TGAAGATGTTGACTACCACGATG-3' | 102                      |
| <i>MCP-1</i>                  | NM_002982.3                       | FW: 5'-GATCTCAGTGCAGAGGCTCG-3'<br>RV: 5'-TGCTTGTCAGGTGGTCCAT-3'        | 153                      |
| <i>TNF<math>\alpha</math></i> | NM_000594.4                       | FW: 5'-GAGGCCAAGCCCTGGTATG-3'<br>RV: 5'-CGGGCCGATTGATCTCAGC-3'         | 91                       |
| <i>TNFR1/<br/>TNFRSF1A</i>    | NM_001065.3                       | FW: 5'-TCACCGCTTCAGAAAACCACC-3'<br>RV: 5'-GGTCCACTGTGCAAGAAGAGA -3'    | 96                       |
| <i>RAGE/<br/>AGER</i>         | NM_001136.4                       | FW: 5'-CTACCGAGTCCGTGTCTACCA-3'<br>RV: 5'-CATCCAAGTGCCAGCTAAGAG-3'     | 146                      |
| <i>SR-BI/<br/>SCARB</i>       | NM_005505.5                       | FW: 5'-CTGTGGGTGAGATCATGTGG-3'<br>RV: 5'-GCCAGAAGTCAACCTTGCTC-3'       | 216                      |
| <i>CAV-1</i>                  | NM_001753.4                       | FW: 5'-AACCTCCTCACAGTTTTTCATCCA-3'<br>RV: 5'-GTCGTACACTTGCTTCTCGCTCA-3 | 165                      |
| <i>VAMP-3</i>                 | NM_004781.4                       | FW: 5'-GTGGTGGACATAATGCGAGTT-3'<br>RV: 5'-CGTCTGCACGGTCGTCTAAC-3'      | 82                       |
| <i>VPO1/<br/>PXDN</i>         | NM_012293.3                       | FW: 5'-AGCCAGCCATCACCTGGAAC-3'<br>RV: 5'-TTCCGGGCCACACACTCATA-3'       | 136                      |
| <i>GRP78</i>                  | NM_005347.4                       | FW: 5'-GAAAGAAGGTTACCCATGCAGT -3'<br>RV: 5'-CAGGCCATAAGCAATAGCAGC -3'  | 149                      |
| <i>sXBP1</i>                  | NM_005080.3<br>NM_001079539.<br>1 | FW: 5'-GCAGGTGCAGGCCCAGT-3'<br>RV: 5'-GAATGCCCAACAGGATATCAGACT -3'     | 100                      |
| <i>p22phox/<br/>CYBA</i>      | NM_000101.3                       | FW: 5'-GTACTTTGGTGCCTACTCCA-3'<br>RV: 5'-CGGCCCCGAACATAGTAATTC-3'      | 167                      |
| <i>ACTB</i>                   | NM_001101.3                       | FW: 5'-GTCTTCCCCTCCATCGT -3'<br>RV: 5'-CGTCGCCACATAGGAAT -3'           | 82                       |



**Figure S3.** Ninj-1 protein expression levels after specific silencing, in primary HUVECs exposed to oscillating glucose. Cells were transfected with specific siRNA for Ninj-1 (siNinj) or a scrambled siRNA (Scr). At 24 h after transfection, cells were exposed alternatively to 5 mM/25 mM glucose (OG) at every 3 h, for 72 h. Data are expressed as fold change versus OG and presented as mean  $\pm$  SD. <sup>&</sup>p < 0.05 vs OG.