

## Validation papers

STARS: 1

Calcium: 0

PI3K/Akt: 3

cAMP/  
AMPK: 1

MAPK: 3

HSP70: 1

NF $\kappa$ B: 1

TGF $\beta$ /smad:  
1

Hippo: 0

From **26 review articles**  
on endurance and  
resistance exercise  
signaling, 9 main  
pathways were identified

Search by pathway for  
endurance or resistance exercise  
Including human, rodent or in-  
vitro exercise studies reporting  
changes in gene or protein  
expression or activity

**Exclude studies that:**  
only report long-term  
training responses; or do  
not specify exercise type  
clearly as resistance or  
endurance; or that report  
a finding contradicted by  
3 or more other papers

Search for (non exercise) studies in  
humans or rodents by pathway in to fill  
gaps in signaling network or to identify  
crosstalk with other pathways

Include studies identifying direct  
activation/inhibition interactions  
between nodes in network

**Exclude studies**  
reporting findings from  
non cell types unless  
linked to an exercise-  
related phenotype in  
muscle

**9 original  
validation  
papers**

Sort by  
pathway

**40 original  
exercise  
papers**

Set aside 1 or  
more papers per  
pathway where  
available reporting  
results of human  
acute single-bout  
exercise for  
validation

**87 original  
formulation  
papers and  
review  
articles**

Sort by  
pathway

## Formulation papers

STARS: 12

Calcium: 9

PI3K/Akt: 16

cAMP/  
AMPK: 5

MAPK: 16

HSP70: 8

NF $\kappa$ B: 6

TGF $\beta$ /smad:  
3

Hippo: 7