SOCS1,3:p-4Y-CSF3R:CSF3 dimer:LYN:p-Y-JAK1:p-JAK2:p-SYK:p-HCK:p-TYK2 binds CUL5, ELOB, ELOC, RNF7

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Introduction

Reactome is open-source, open access, manually curated and peer-reviewed pathway database. Pathway annotations are authored by expert biologists, in collaboration with Reactome editorial staff and cross-referenced to many bioinformatics databases. A system of evidence tracking ensures that all assertions are backed up by the primary literature. Reactome is used by clinicians, geneticists, genomics researchers, and molecular biologists to interpret the results of high-throughput experimental studies, by bioinformaticians seeking to develop novel algorithms for mining knowledge from genomic studies, and by systems biologists building predictive models of normal and disease variant pathways.

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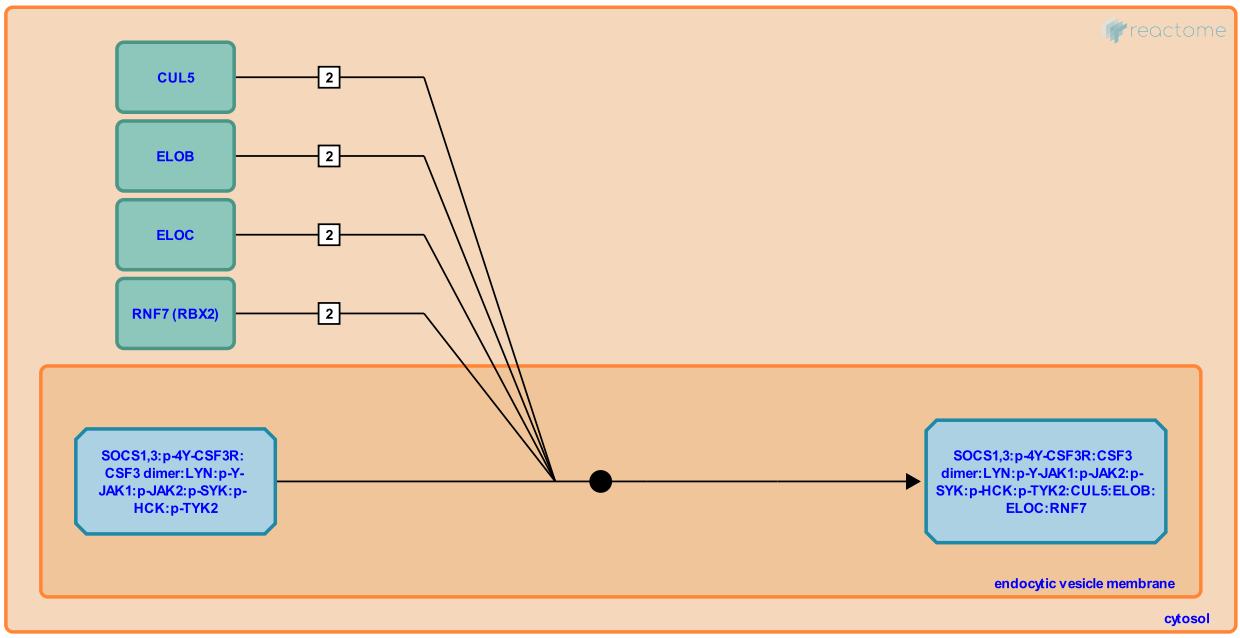
SOCS1,3:p-4Y-CSF3R:CSF3 dimer:LYN:p-Y-JAK1:p-JAK2:p-SYK:p-HCK:p-TYK2 binds CUL5, ELOB, ELOC, RNF7 ↗

Stable identifier: R-HSA-9705729

Type: binding

Compartments: endocytic vesicle membrane

Inferred from: Socs1,3:p-4Y-Csf3r:Csf3 dimer:Lyn:p-Y-Jak1:p-Jak2:p-Syk:p-Hck:p-Tyk2 binds Cul5, EloB, EloC, and Rnf7 (Mus musculus)



SOCS1 and SOCS3 recruit Elongin B (ELOB), Elongin C (ELOC), Cullin5 (CUL5), and RNF7 to CSF3R to form a ubiquitin E3 ligase complex (Kamura et al. 2004 and inferred from mouse homologs). SOCS3 has 100-fold higher affinity for CUL5 than SOCS1 has (inferred from mouse homologs).

Literature references

Kotoshiba, S., Kamura, T., Kohda, D., Maenaka, K., Nakayama, KI., Conaway, JW. et al. (2004). VHL-box and SOCS-box domains determine binding specificity for Cul2-Rbx1 and Cul5-Rbx2 modules of ubiquitin ligases. *Genes Dev, 18*, 3055-65. ↗

Editions

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