

Product no **AS16 3955****Anti-PIF4 | Phytochrome interacting factor 4 (goat antibody)****Product information****Immunogen** | KLH-conjugated peptide derived from *Arabidopsis thaliana* PIF4, UniProt:[Q8W2F3](#), TAIR:[AT2G43010](#)**Host** | Goat**Clonality** | Polyclonal**Purity** | Immunogen affinity purified serum in PBS pH 7.4.**Format** | Lyophilized**Quantity** | 50 µg**Reconstitution** | For reconstitution add 50 µl of sterile water**Storage** | Store lyophilized/reconstituted at -20°C; once reconstituted make aliquots to avoid repeated freeze-thaw cycles, Please remember to spin the tubes briefly prior to opening them to avoid any losses that might occur from material adhering to the cap or sides of the tube.**Additional information** | PIF proteins are not that stable, therefore special precautions should be taken during extraction and whole procedure should be performed in as little light as possible (light green light).Extraction of PIF proteins is described in [Shen](#) et al. (2007).**Application information****Recommended dilution** | 1 : 1000 (WB)**Expected | apparent MW** | 48.3 | 60 kDa**Confirmed reactivity** | *Arabidopsis thaliana***Predicted reactivity** | *Brassica napus*, *Brassica rapa*, *Camelina sativa*, *Eutrema salsugineum*Species of your interest not listed? [Contact us](#)**Not reactive in** | *Solanum lycopersicum*, *Vitis vinifera***Additional information** | Material used need to be up to 8 days old as detection in older rosette leaf may fail

**Selected references** | [Malakar](#) et al. (2025). BBX24/BBX25 antagonizes the function of thermosensor ELF3 to promote PIF4-mediated thermomorphogenesis in Arabidopsis. Plant Commun. 2025 May 28;101391.doi: 10.1016/j.xplc.2025.101391.

[Bian](#) et al. (2024). The BBX7/8 CCA1/LHY transcription factor cascade promotes shade avoidance by activating PIF4. New Phytol . 2024 Nov 8. doi: 10.1111/nph.20256.

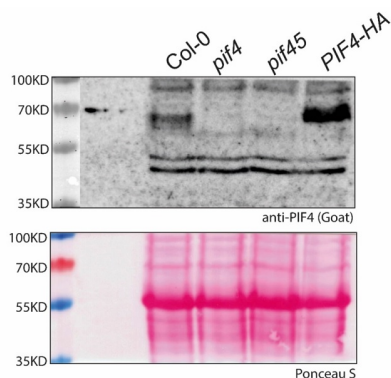
[Fang](#) et al. (2022) TANDEM ZINC-FINGER/PLUS3 regulates phytochrome B abundance and signaling to fine-tune hypocotyl growth. Plant Cell. 2022;34(11):4213-4231. doi:10.1093/plcell/koac236

[Bairacharya](#), Xi, Grace, et al. (2022) PHYTOCHROME-INTERACTING FACTOR 4/HEMERA-mediated thermosensory growth requires the Mediator subunit MED14. Plant Physiol. 2022;190(4):2706-2721. doi:10.1093/plphys/kiac412

[Agrawal](#) et al. (2022) MEDIATOR SUBUNIT17 integrates jasmonate and auxin signaling pathways to regulate thermomorphogenesis. Plant Physiol. 2022 Aug 1;189(4):2259-2280. doi: 10.1093/plphys/kiac220. PMID: 35567489.

[Lee](#) et al. (2021) Spatial regulation of thermomorphogenesis by HY5 and PIF4 in Arabidopsis. Nat Commun. 2021 Jun 16;12(1):3656. doi: 10.1038/s41467-021-24018-7. PMID: 34135347; PMCID: PMC8209091.

[Lee](#), Paik & Huq. (2020). SPAs promote thermomorphogenesis by regulating the phyB-PIF4 module in Arabidopsis. Development. 2020 Oct 8;147(19):dev189233. doi: 10.1242/dev.189233. PMID: 32994167; PMCID: PMC7561471.



30  $\mu$ l of total protein from *Arabidopsis thaliana* grown in 12 hour light/ 12 hour dark growth conditions and 6-day-old seedling samples taken at the end of the day (ZT12) were extracted with 100 mM MOPS, pH 7.6, 100 mM NaCl, 10% glycerol, 40 mM 2-mercaptoethanol, 5% SDS, 1X protease inhibitor cocktail from Roche, 2 mM PMSF. 80  $\mu$ l buffer were added to about 100  $\mu$ l grinded powder, then immediately heated at 70°C for 10 minutes and separated on 8 % Bis-Tris SDS-PAGE and blotted 1h to PVDF using semi-dry or tank transfer. Blots were blocked with 5 % non-fat milk in TBST for 1h at room temperature (RT) with agitation. Blot was incubated in the primary antibody at a dilution of 1: 1 000 for over night at 4°C with agitation in TBS-T. The antibody solution was decanted and the blot was rinsed briefly twice, then washed once for 15 min and 3 times for 5 min in TBS-T at RT with agitation. Blot was incubated in secondary antibody (anti-goat IgG horse radish peroxidase conjugated) diluted to 1:10 000 in for 1h at RT with agitation. The blot was washed as above and developed for 5 minutes with chemiluminescent detection reagent. Exposure time was 1 minute.

Courtesy of Dr. Bo Zhang, Umeå Plant Science Centre, Sweden