

Supporting Information for the full uncropped Gels and Blot images:

Fejervarins, Novel Anionic Octapeptides, Promote Cutaneous Wound Healing by

Targeting TGFBR2 to Relieve Inflammation and Activate Tissue Repair

Yanmei Zha^{a, b}, Shangjun Jiang^a, Ting Zhao^a, Shuangshuang Wei^b, Junchen Lyu^c, Wenting Hu^a,

Yanting Song^a, Tianchen An^d, Rong Wang^{a,*}, and Yingxia Zhang^{a,*}

a Key Laboratory of Tropical Biological Resources of Ministry of Education, School of Pharmaceutical Sciences, Collaborative Innovation Center of One Health, Hainan University, Haikou, China

b College of Life and Health Sciences, Hainan University, Haikou, China

c Chinese Communist Youth League Committee, Hainan University, Haikou, China

d Institute of Pediatrics, Shenzhen Children's Hospital, Shenzhen, China

***Correspondence:** To whom correspondence should be addressed: wangrong@hainanu.edu.cn; zhangyingxia@hainanu.edu.cn

Author Contributions: Yanmei Zha: writing original draft, methodology, investigation, data curation.

Shangjun Jiang: methodology, investigation. Ting Zhao: methodology, investigation. Shuangshuang

Wei: data curation. Junchen Lyu: methodology, investigation. Wenting Hu: data curation. Yanting

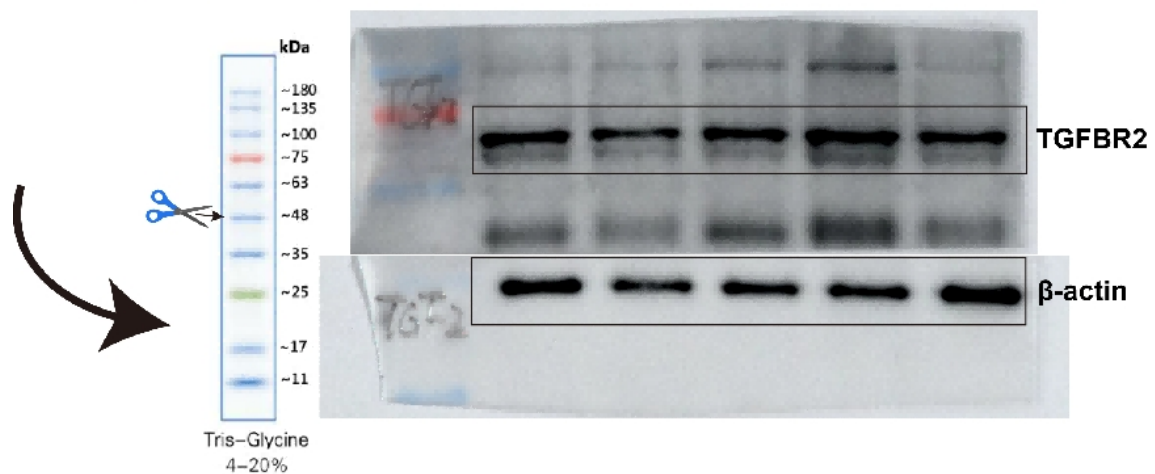
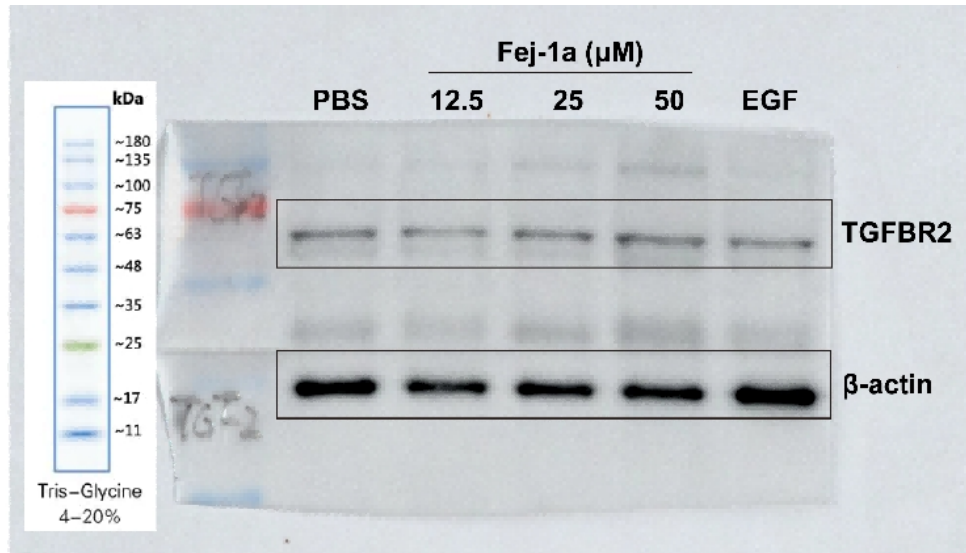
Song: data curation. Tianchen An: data curation. Rong Wang: supervision, funding acquisition. Yingxia

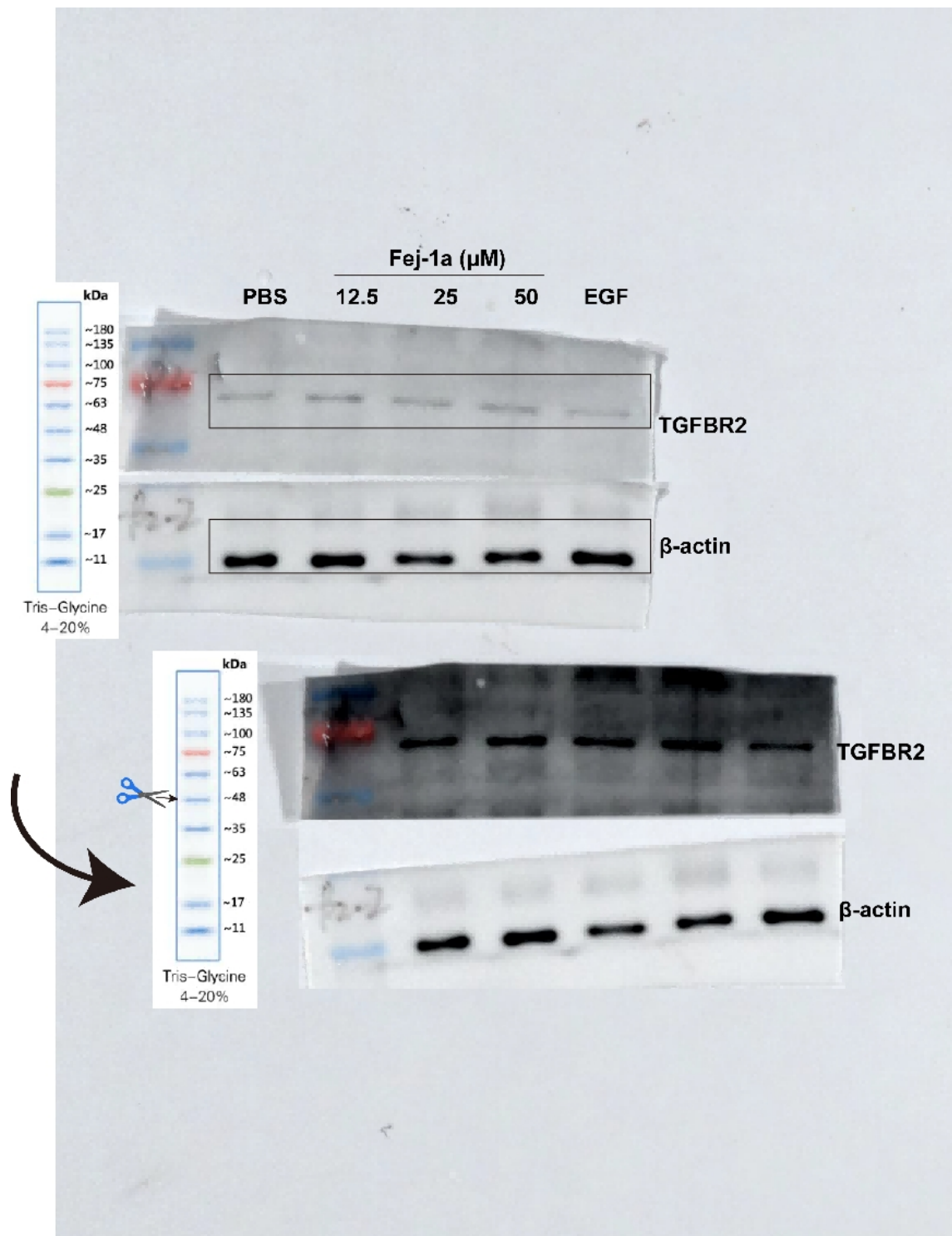
Zhang: supervision, project administration, funding acquisition.

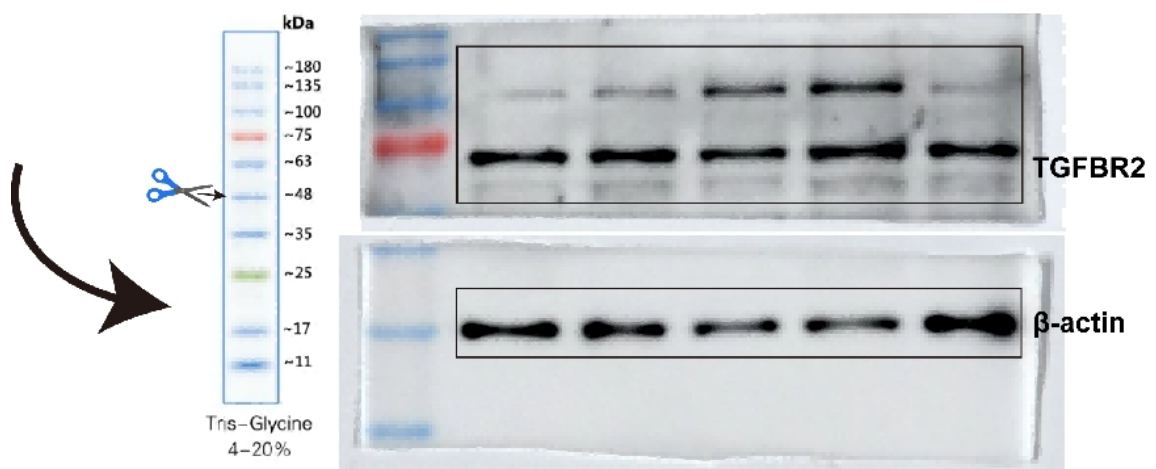
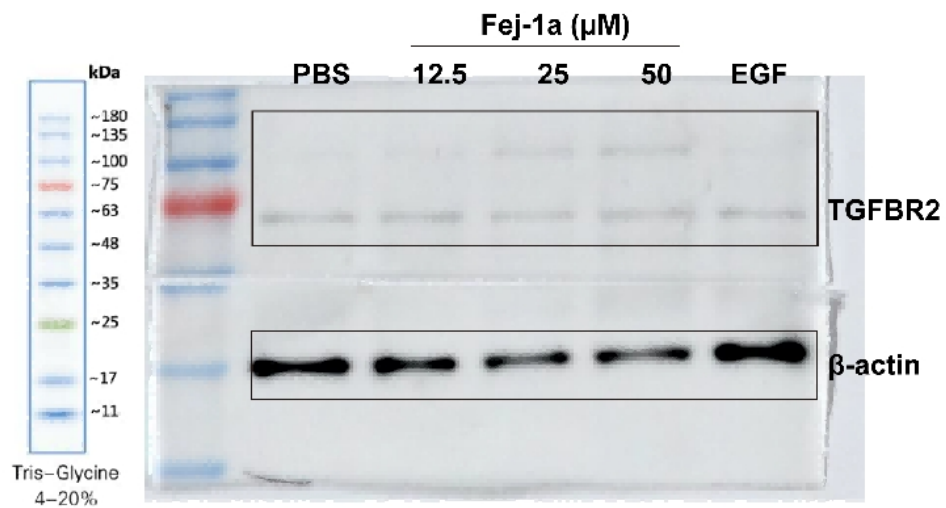
The authors declare no competing interest.

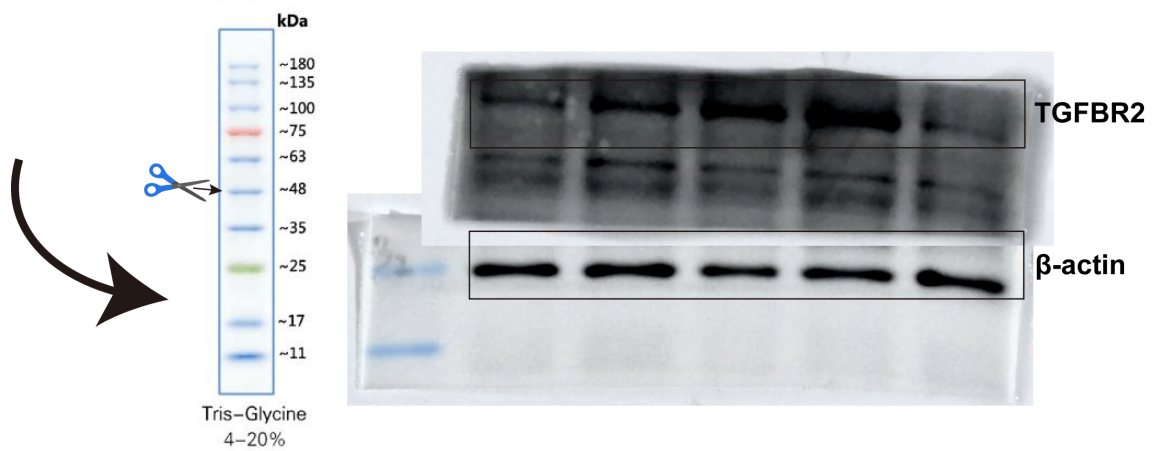
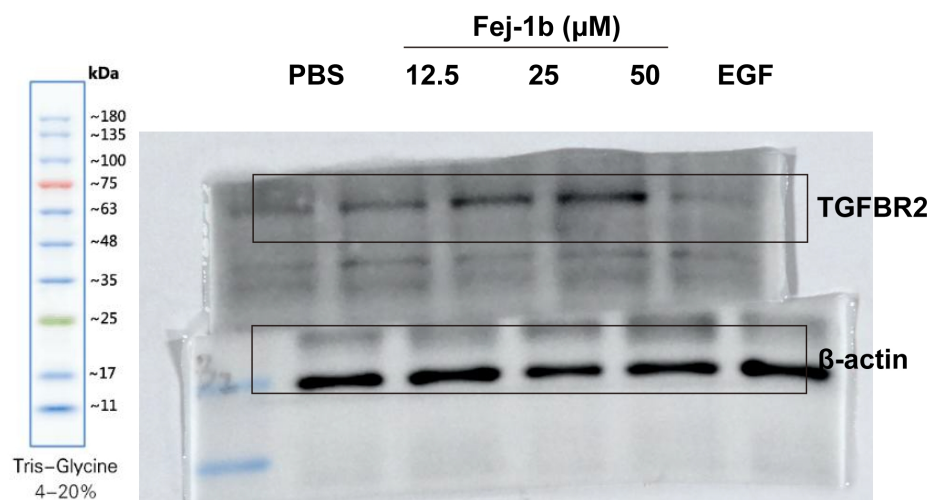
1.Fig.4. Western blot quantification of TGF- β pathway proteins (TGFB β R2, Smad2/3, p-Smad2/3, Smad4) in wound tissues following treatment with Fej-1a and Fej-1b at day 9. β -actin (1:1000, Beyotime, AF5003), GAPDH (1:2000, Beyotime, AF1186), and α -Tubulin (1:2000, Affinity, AF7010)

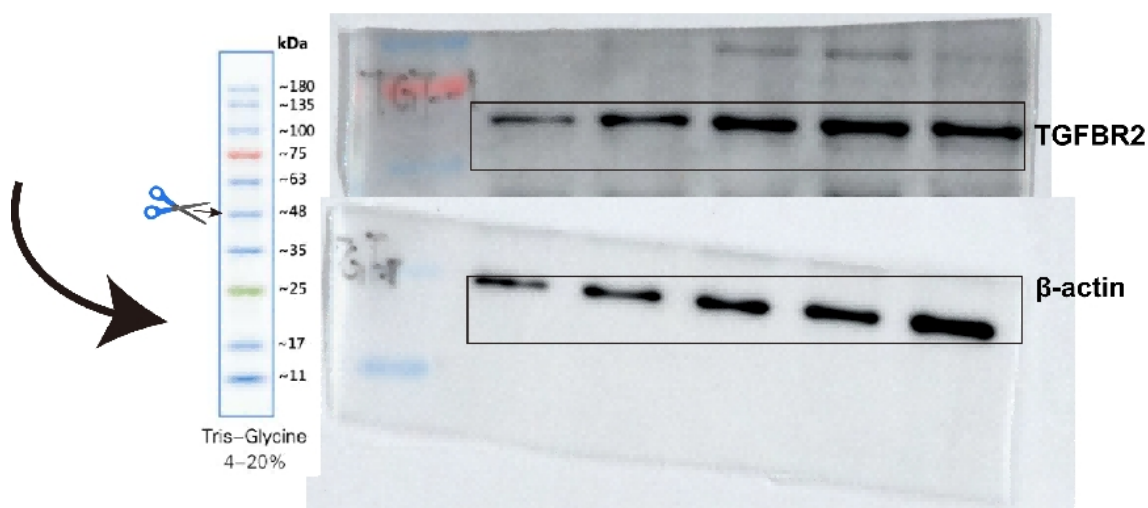
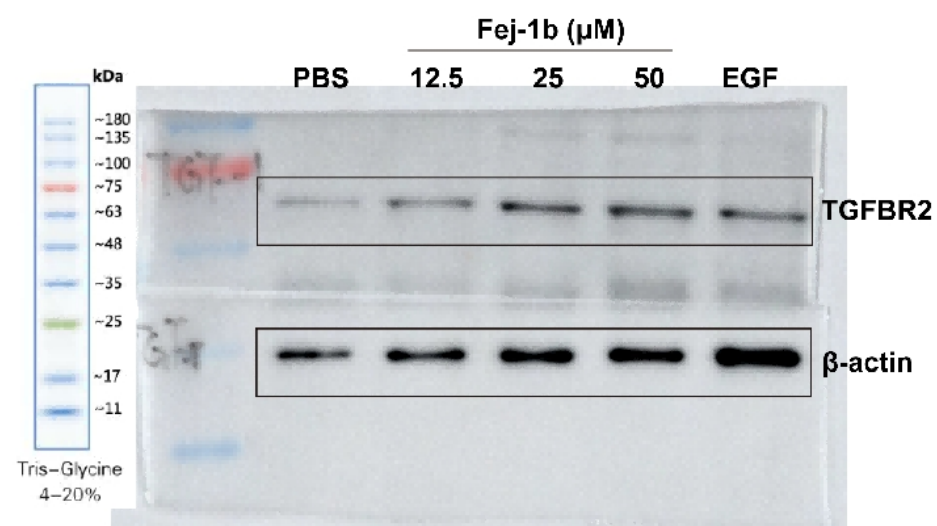
(1) TGFB β R2 (1:1000, Abcam, ab184948)

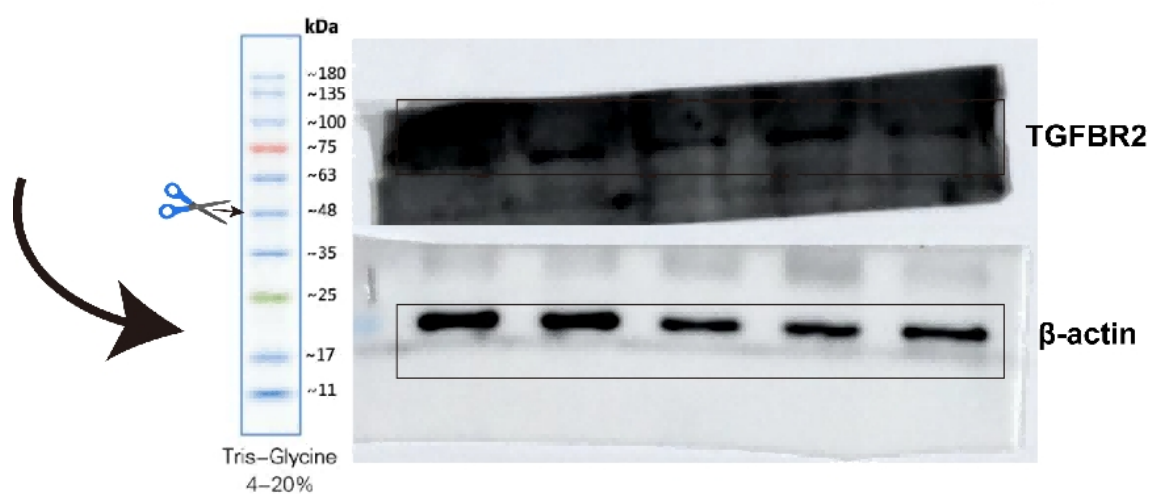
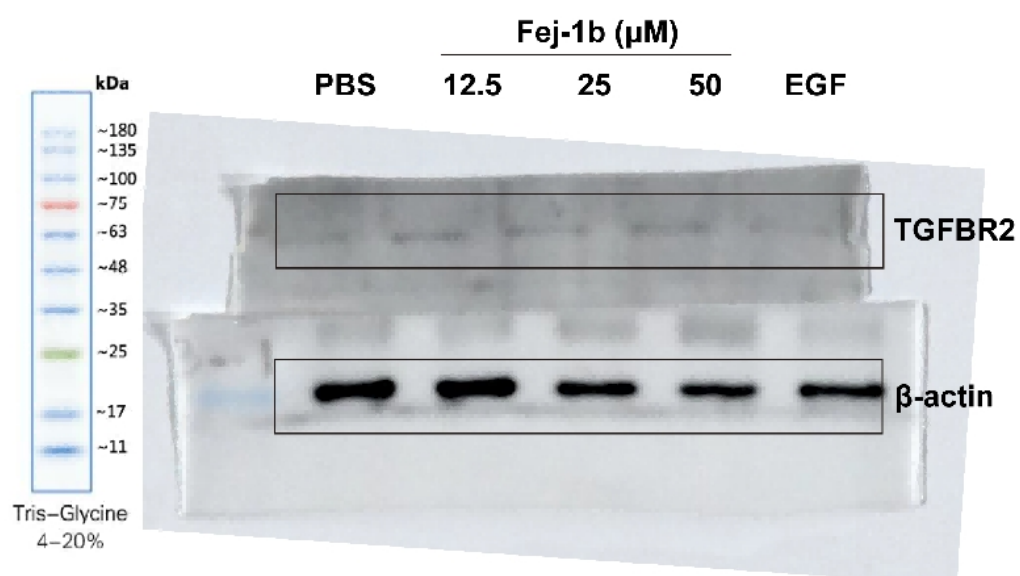




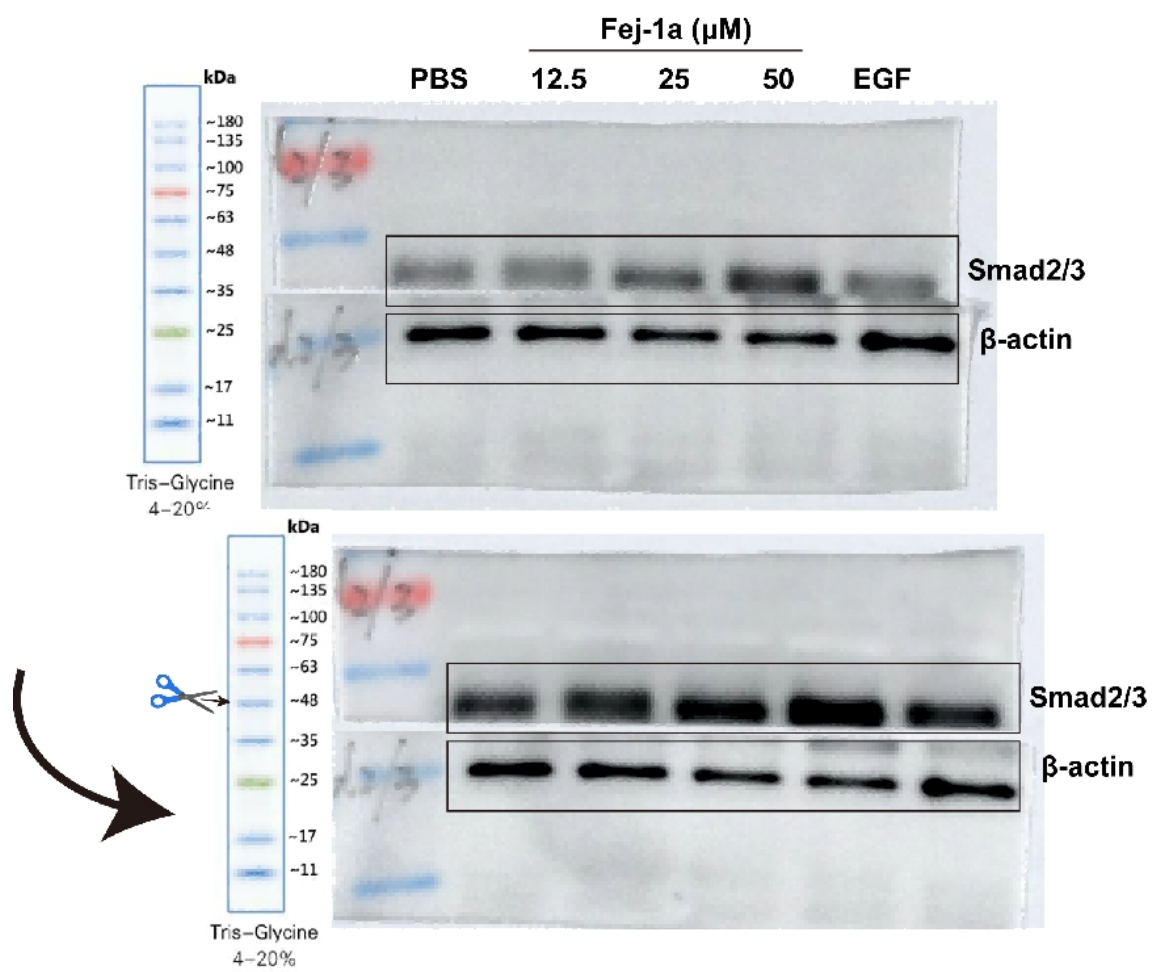


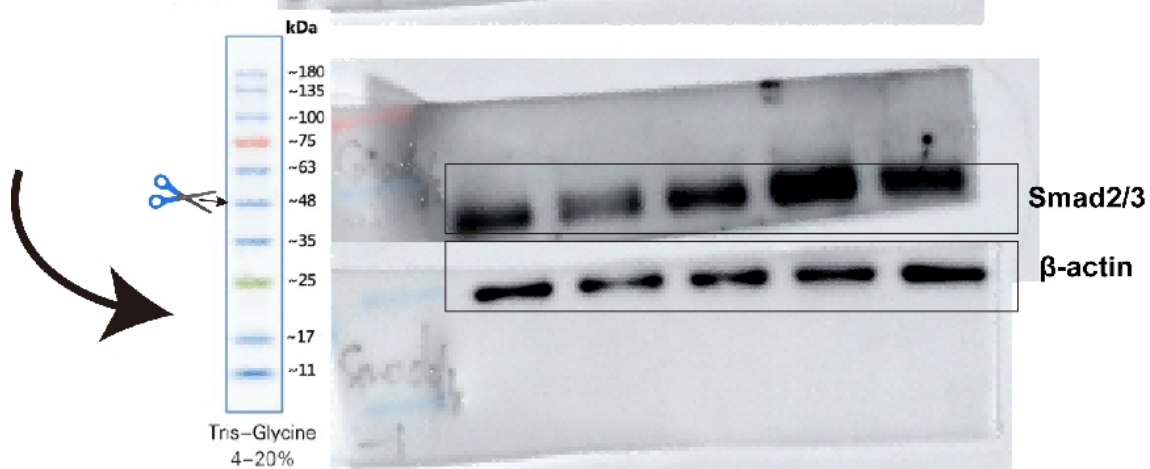
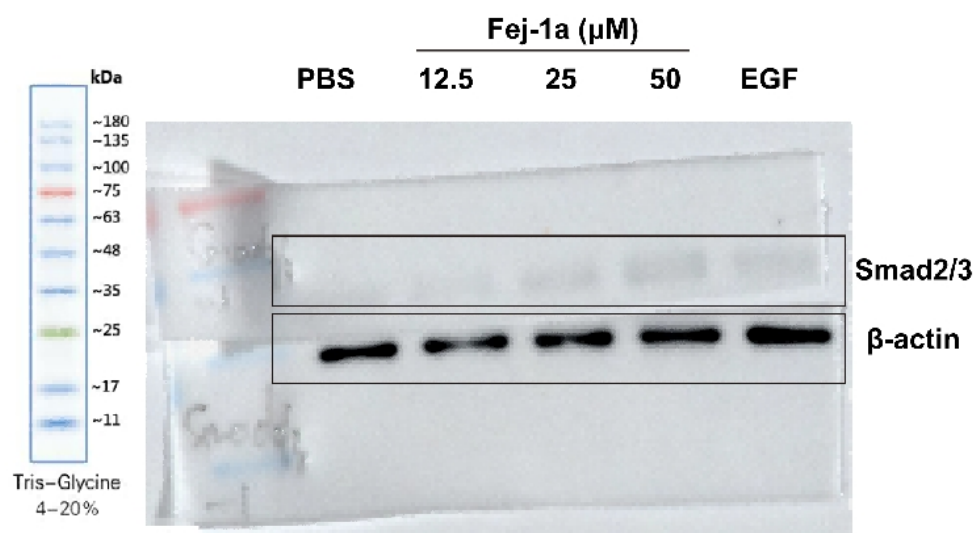


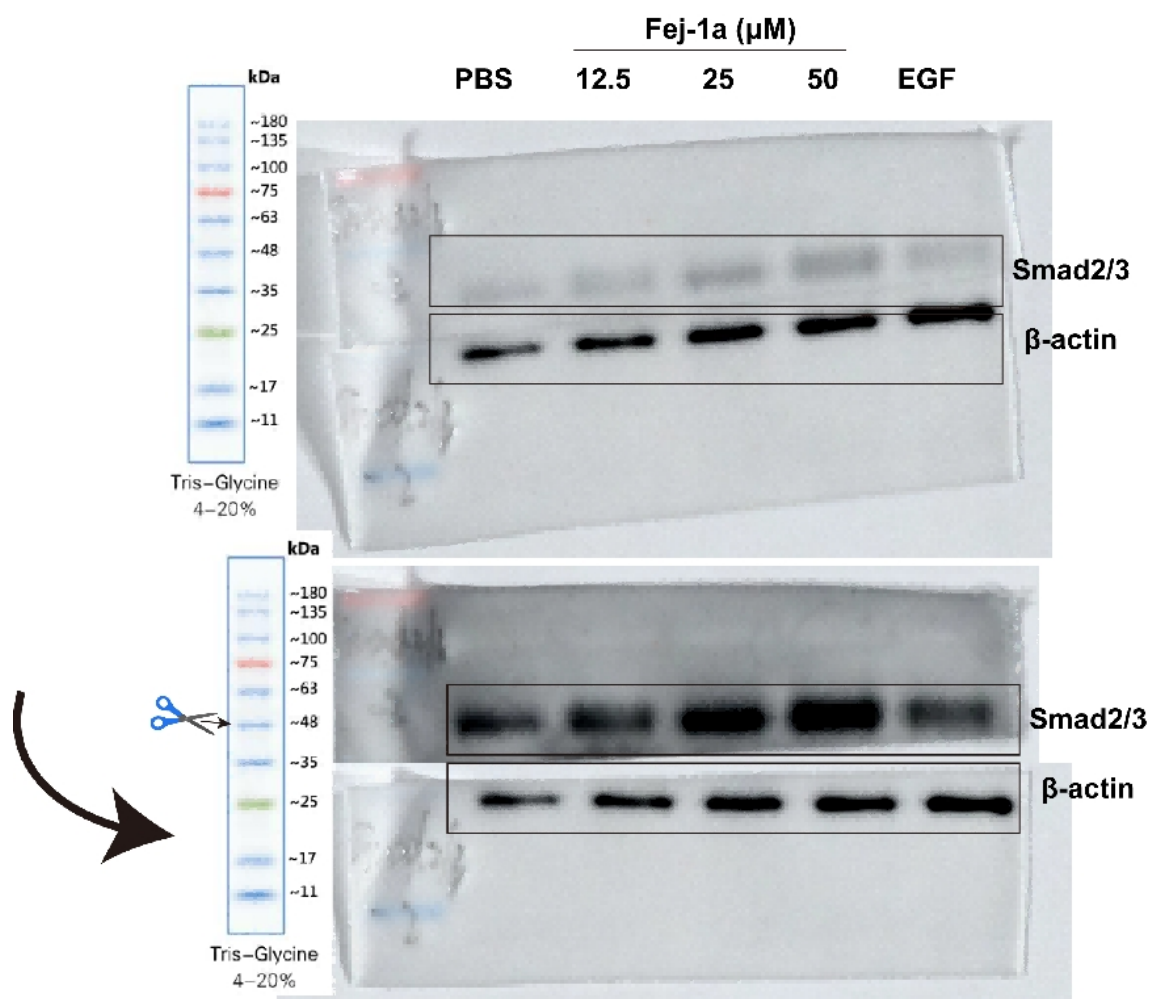


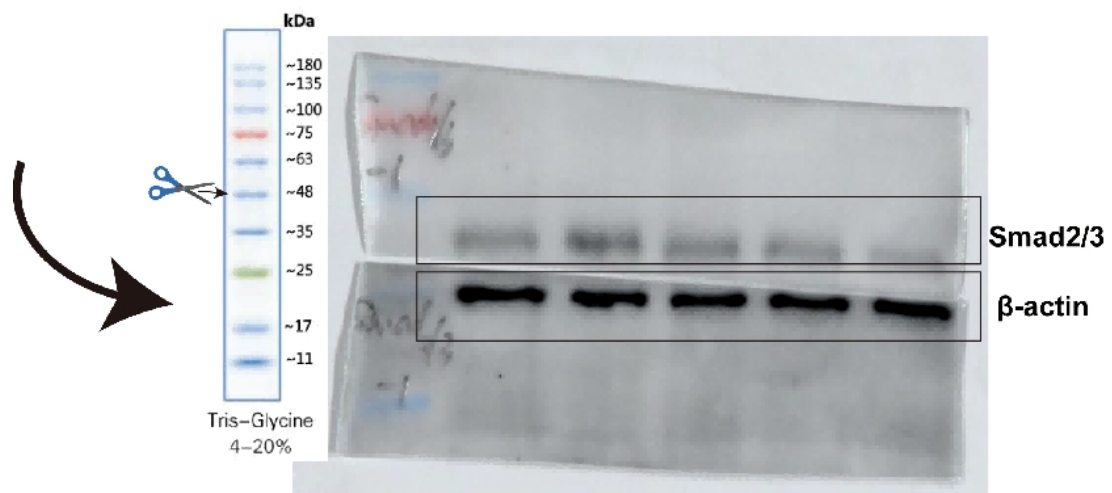
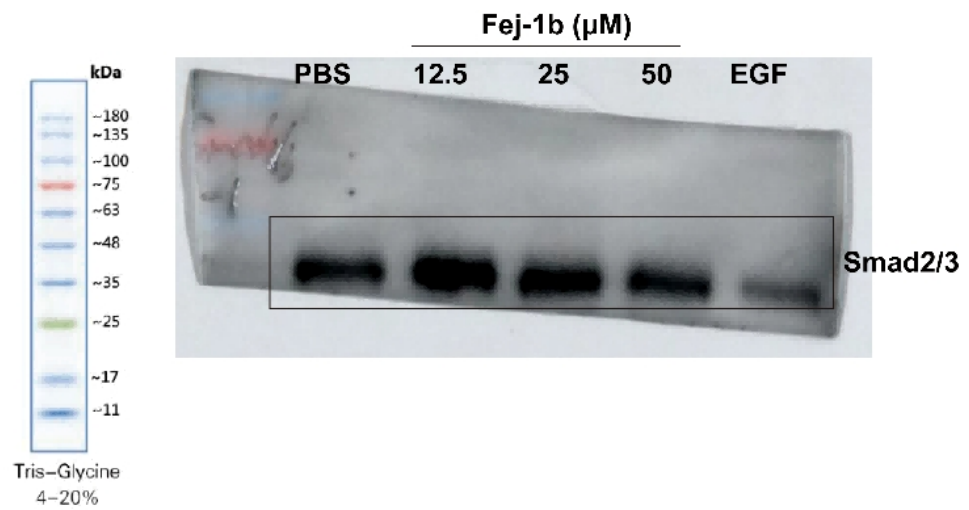


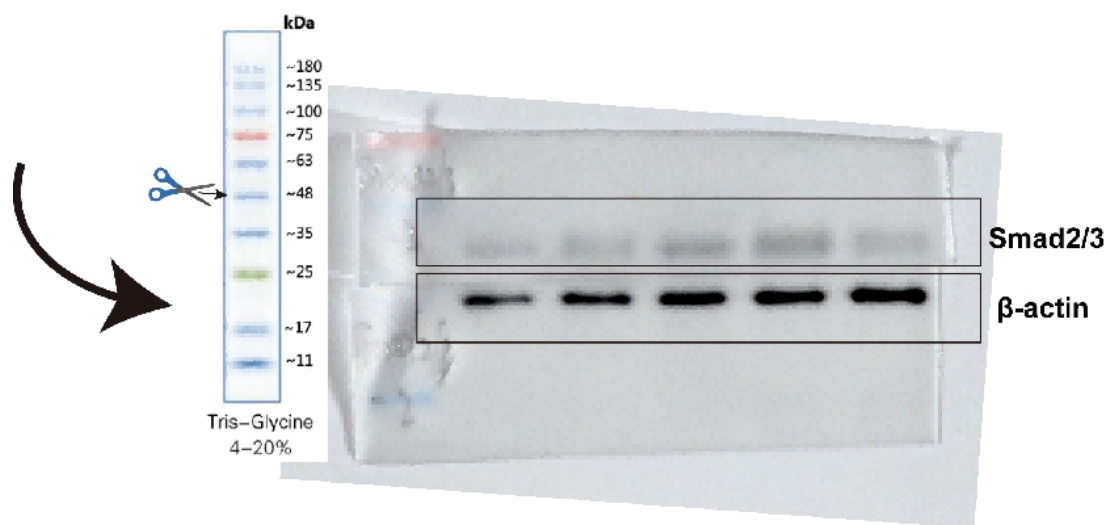
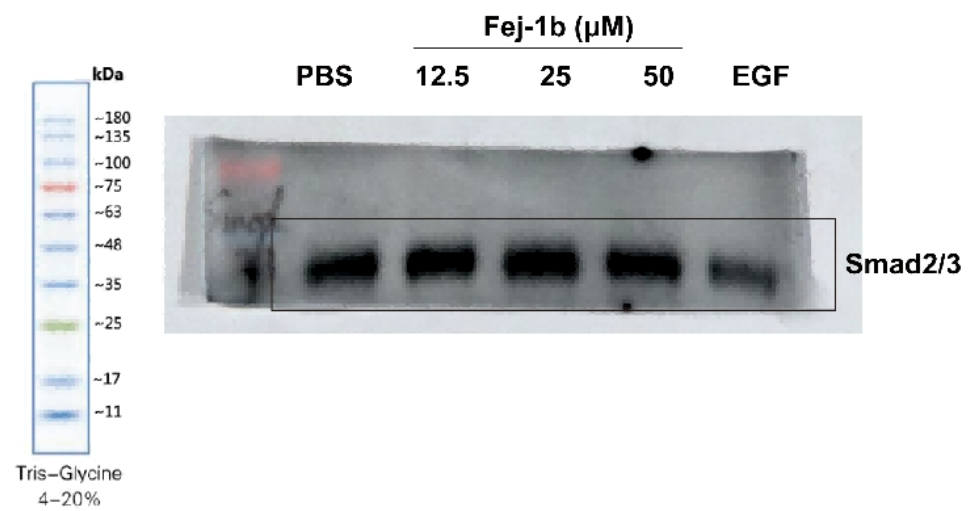
(2) Smad2/3 (1:1000, Abcam, ab202445)

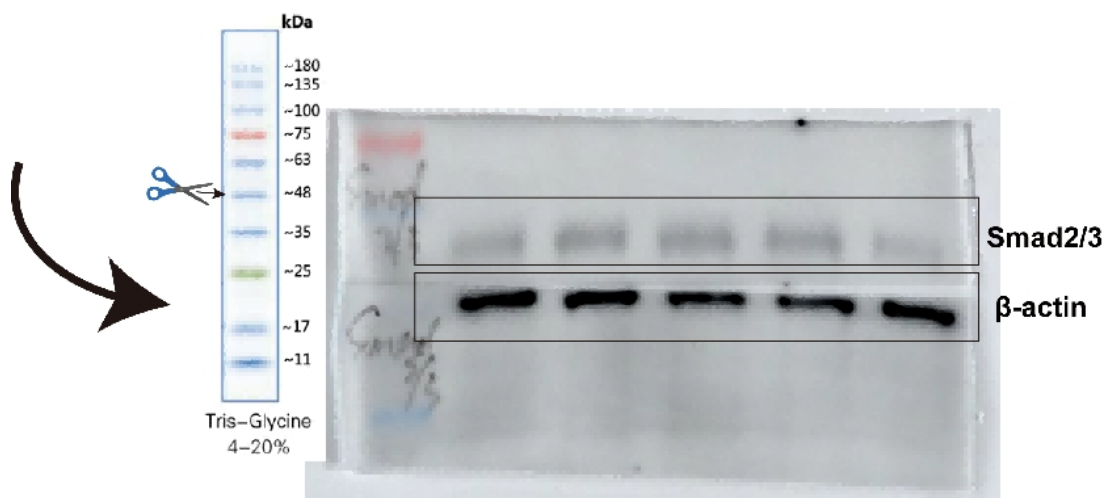
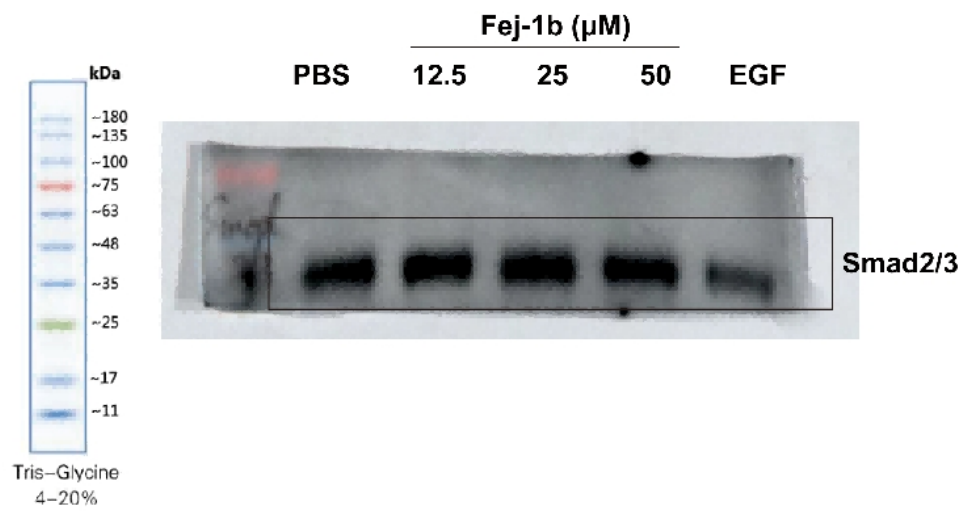




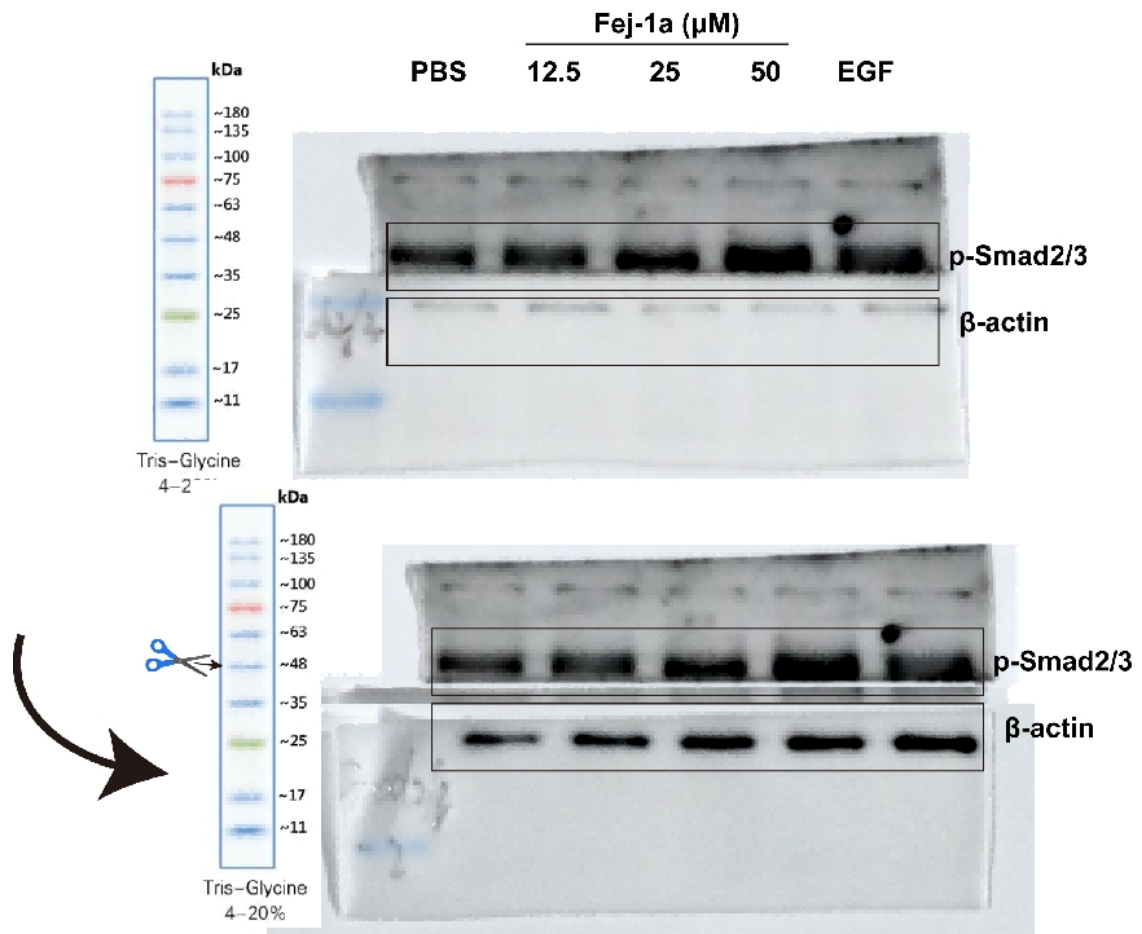


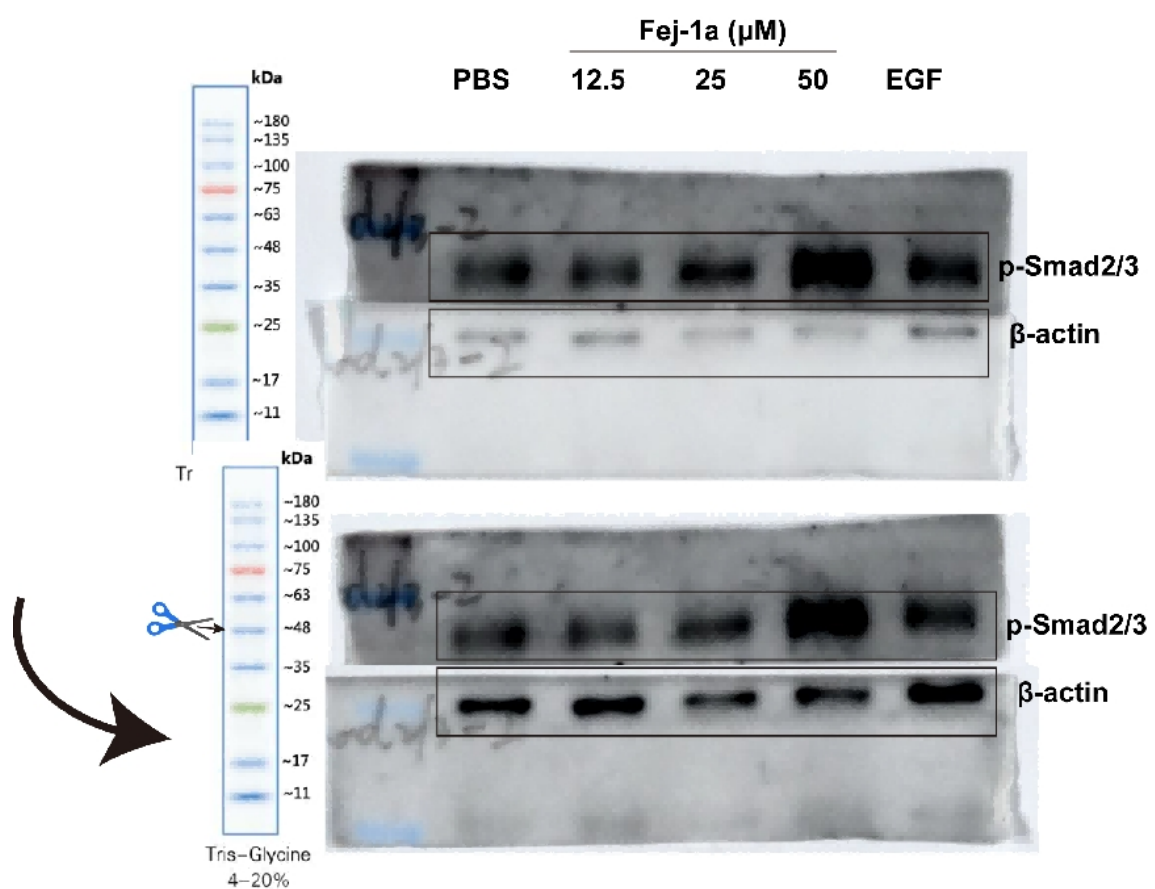
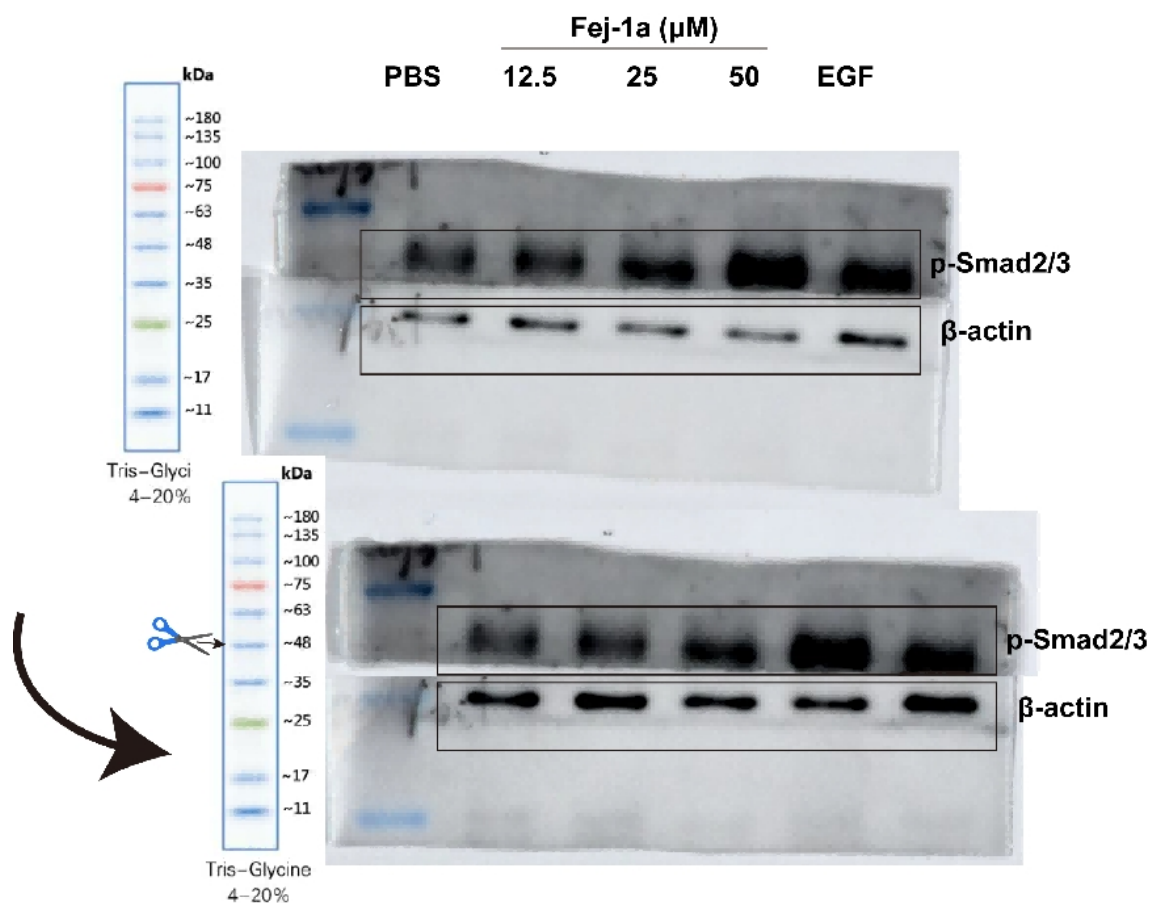


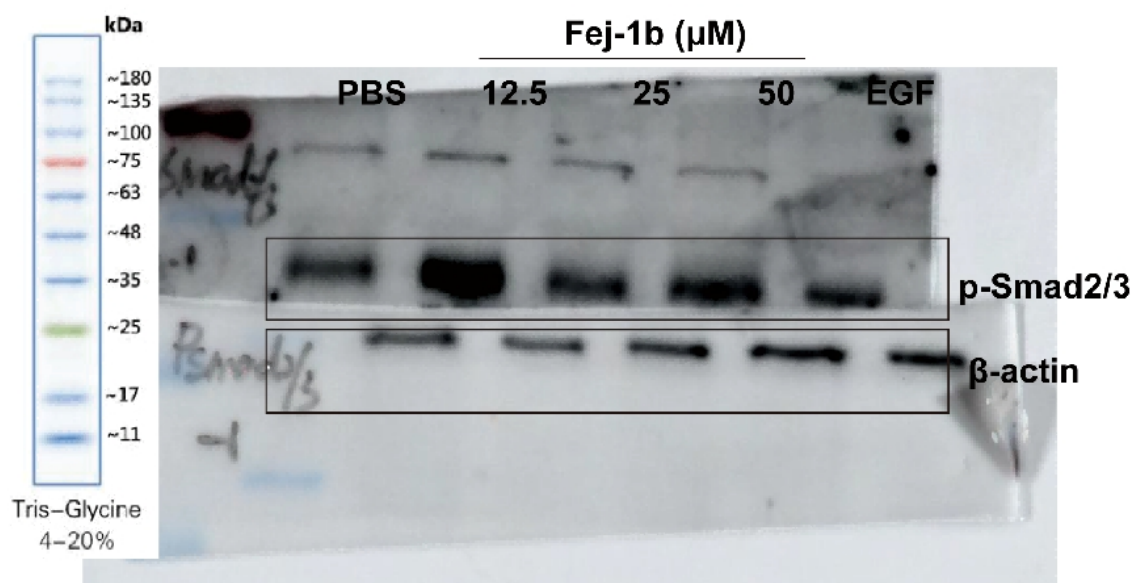
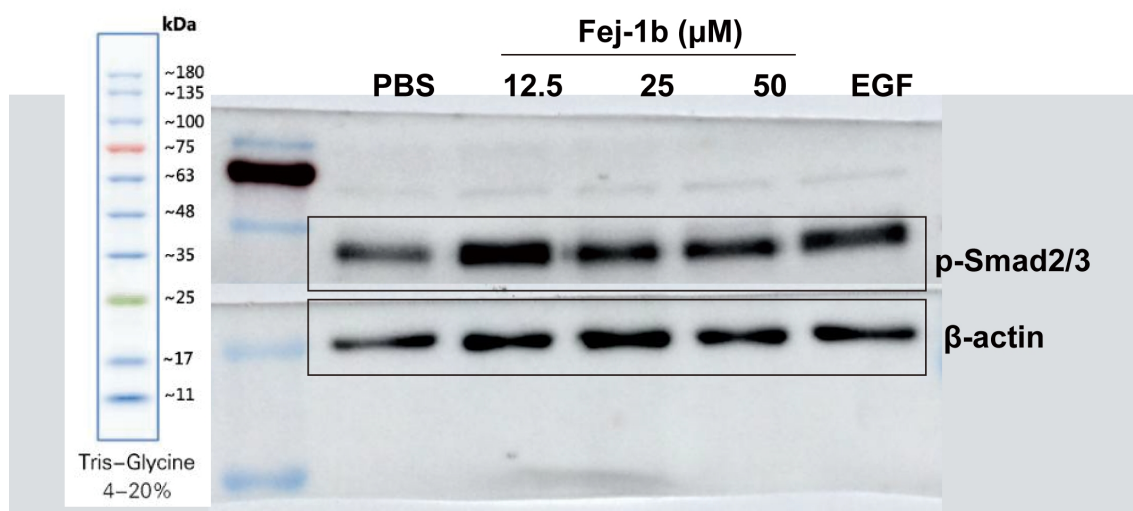
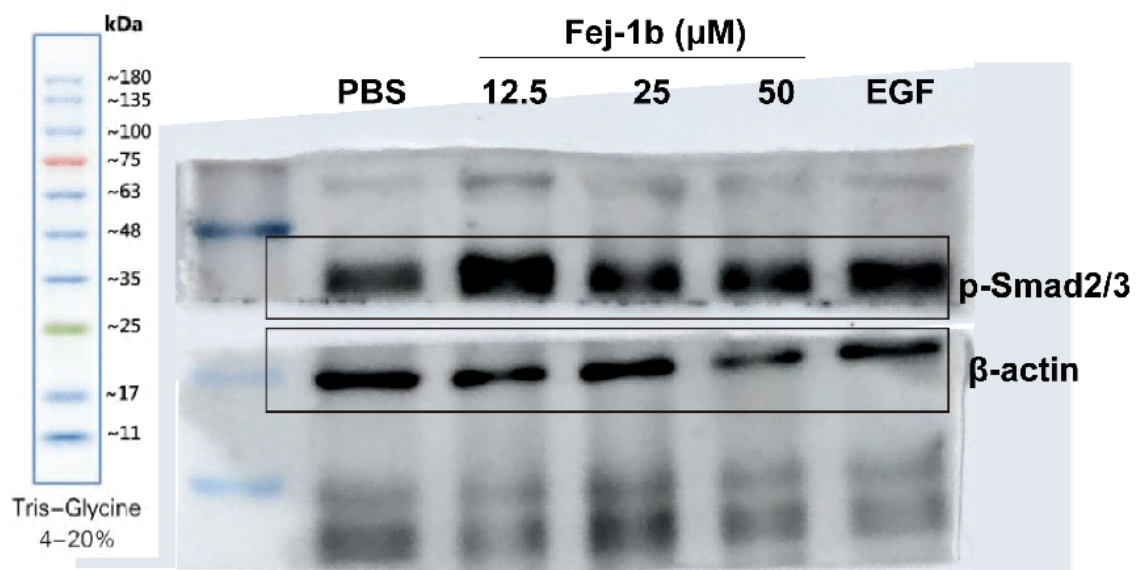




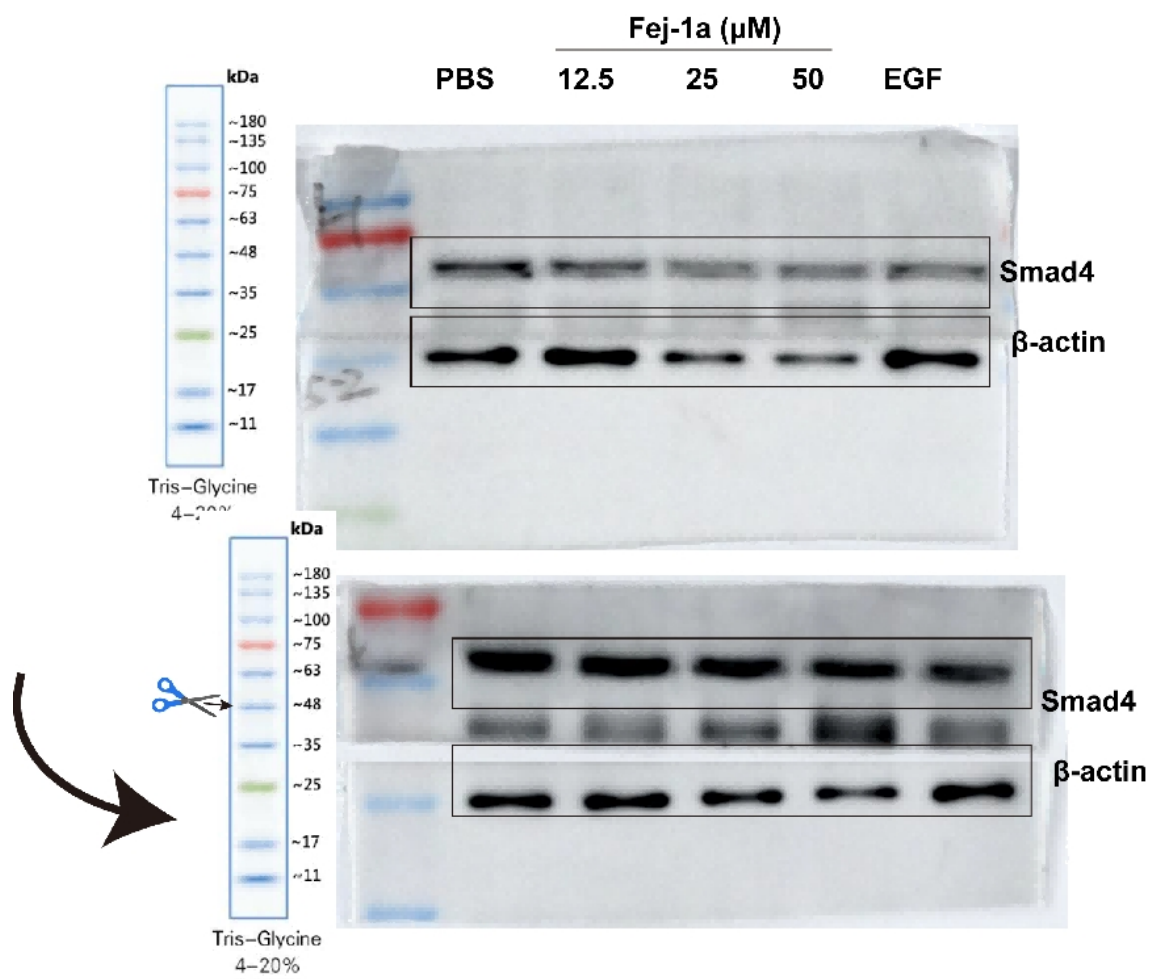
(3) Phospho-Smad2/3 (1:1000, Abcam, ab63399)

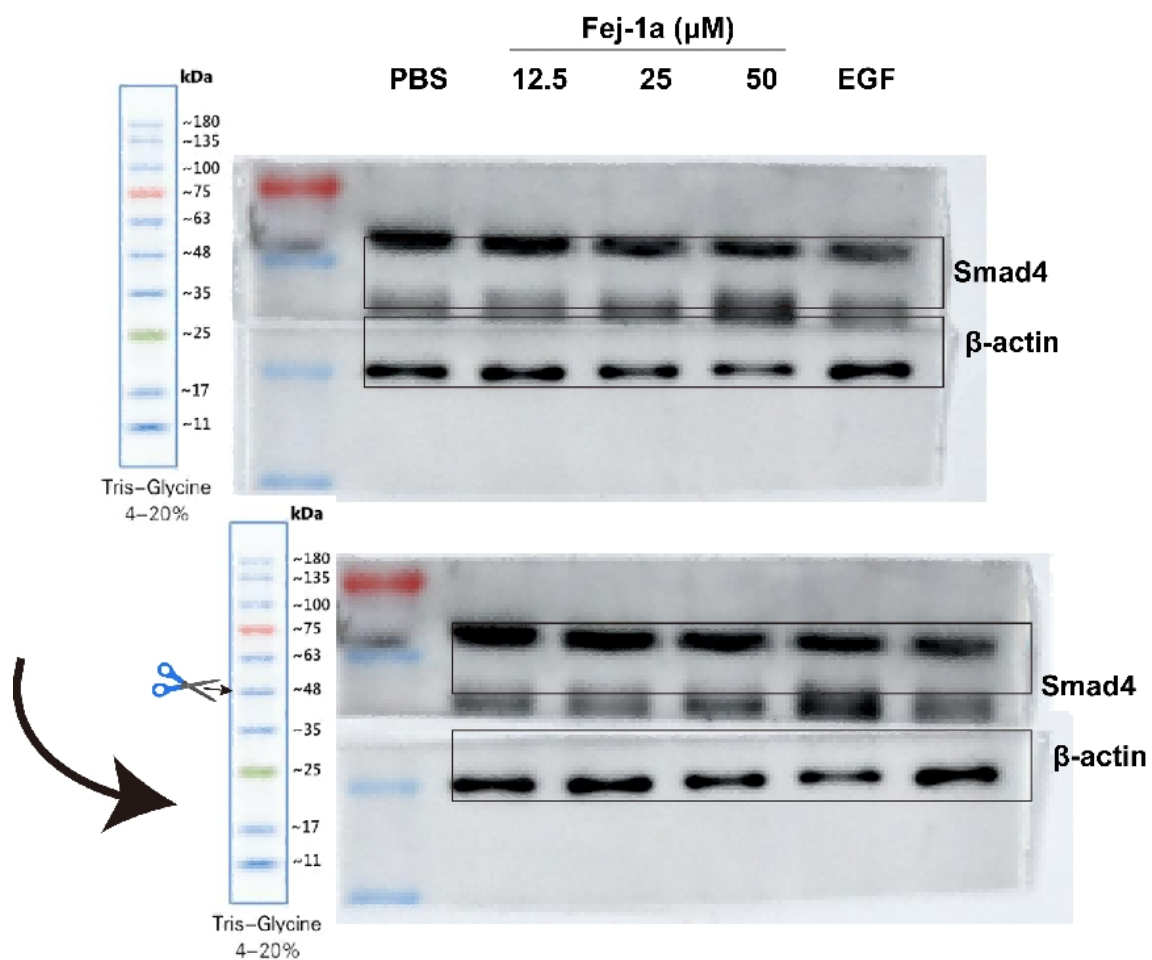


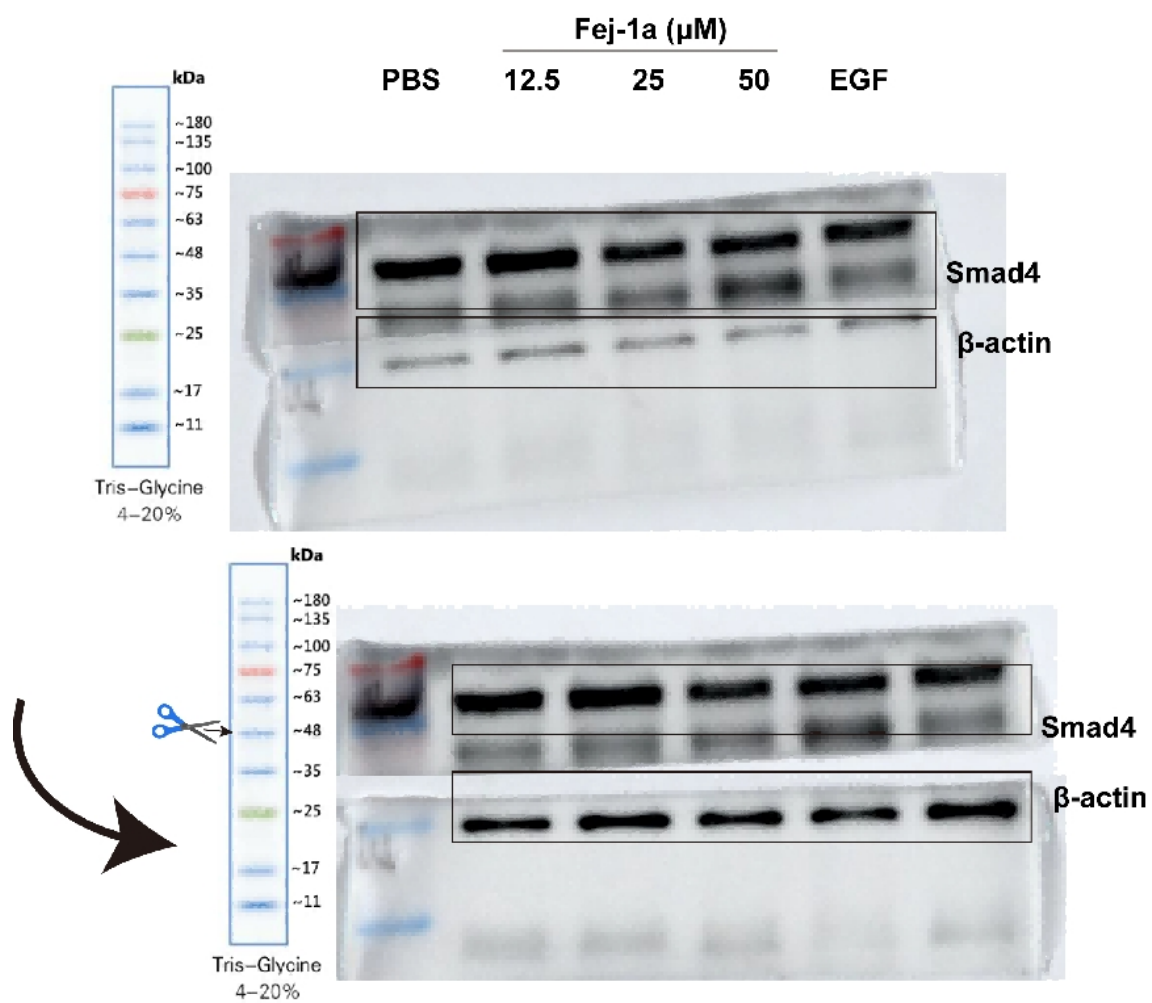


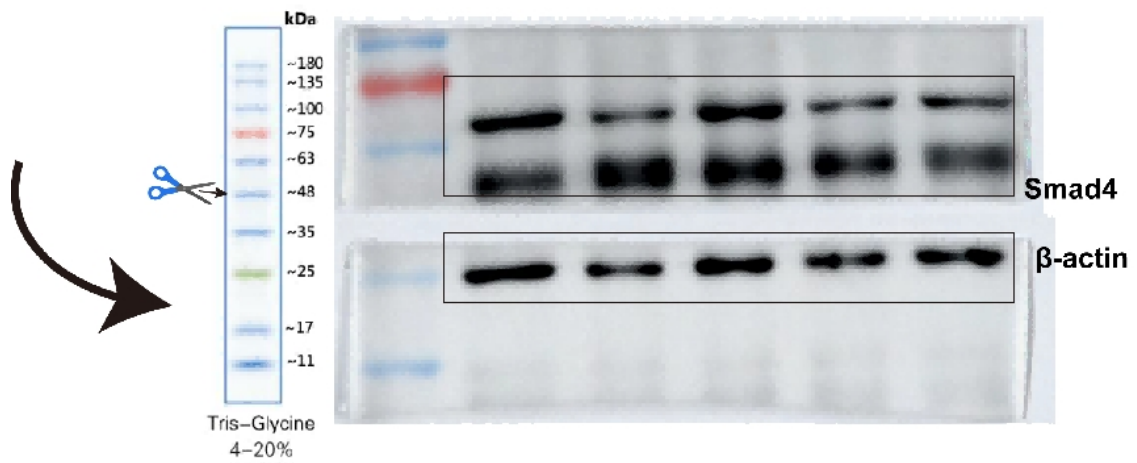
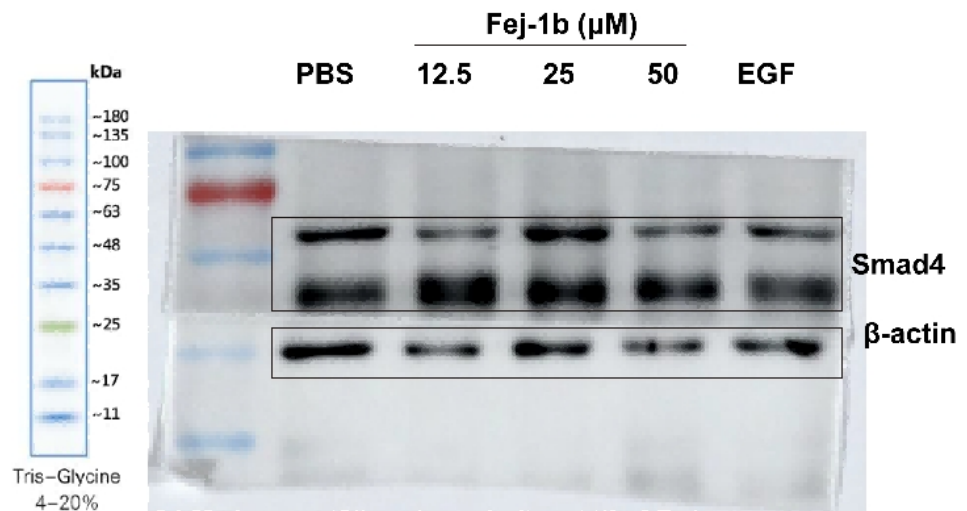


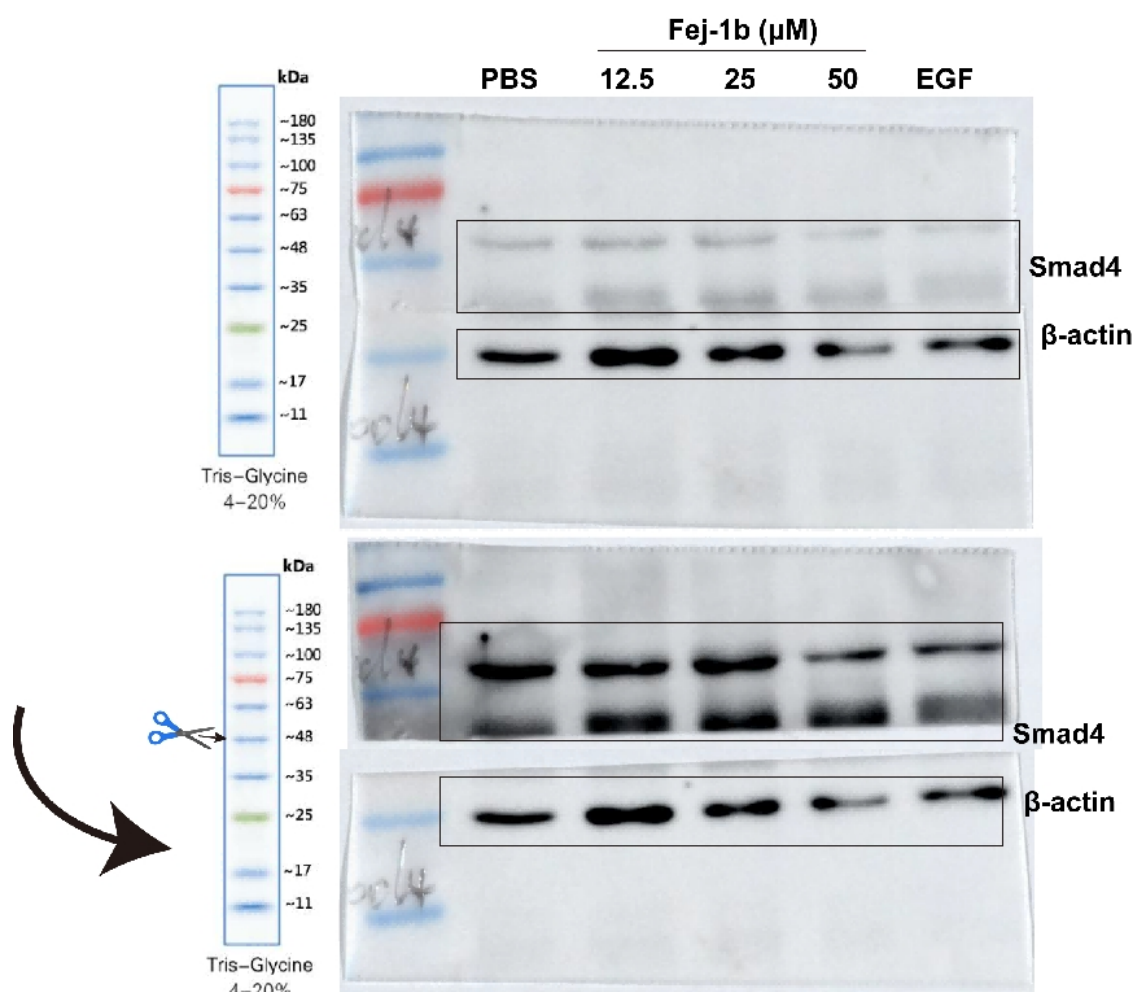
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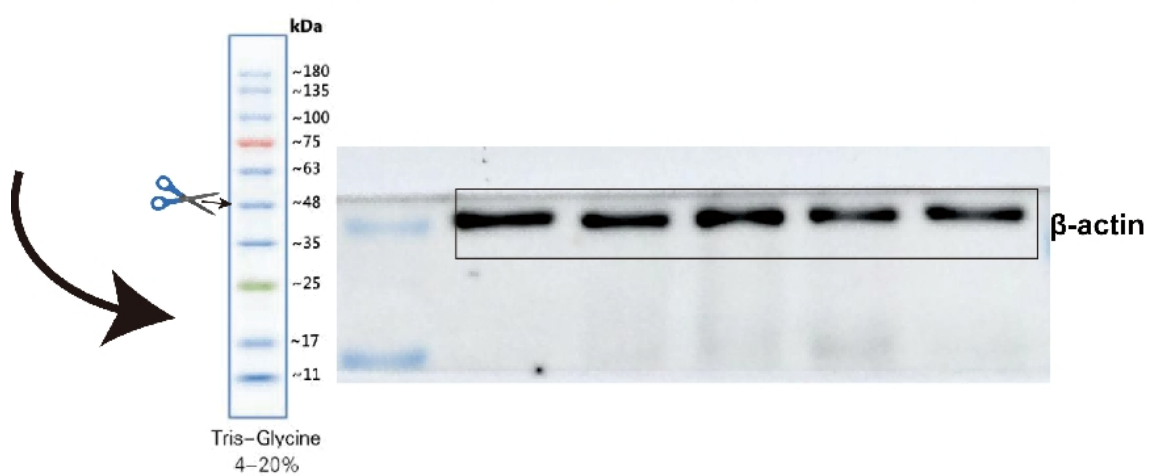
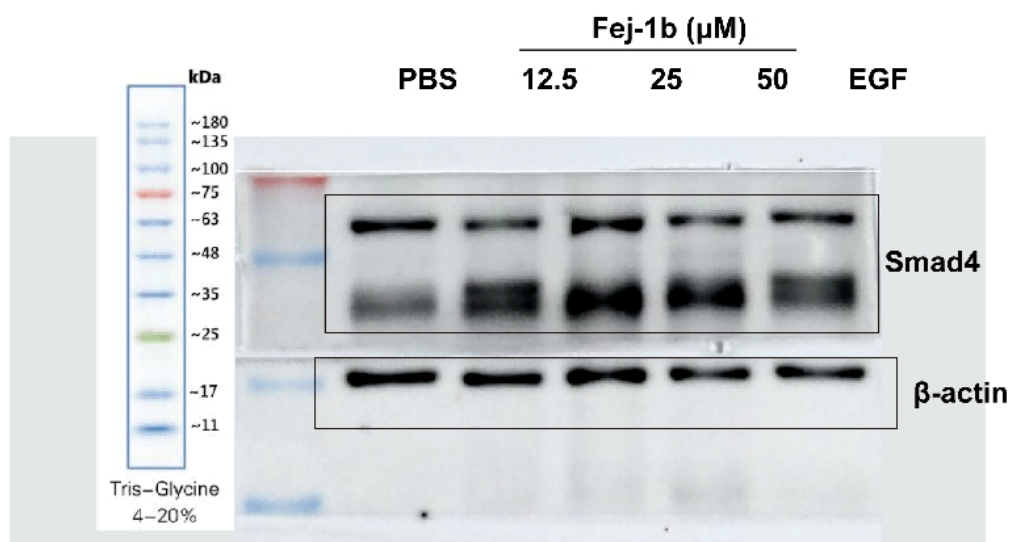




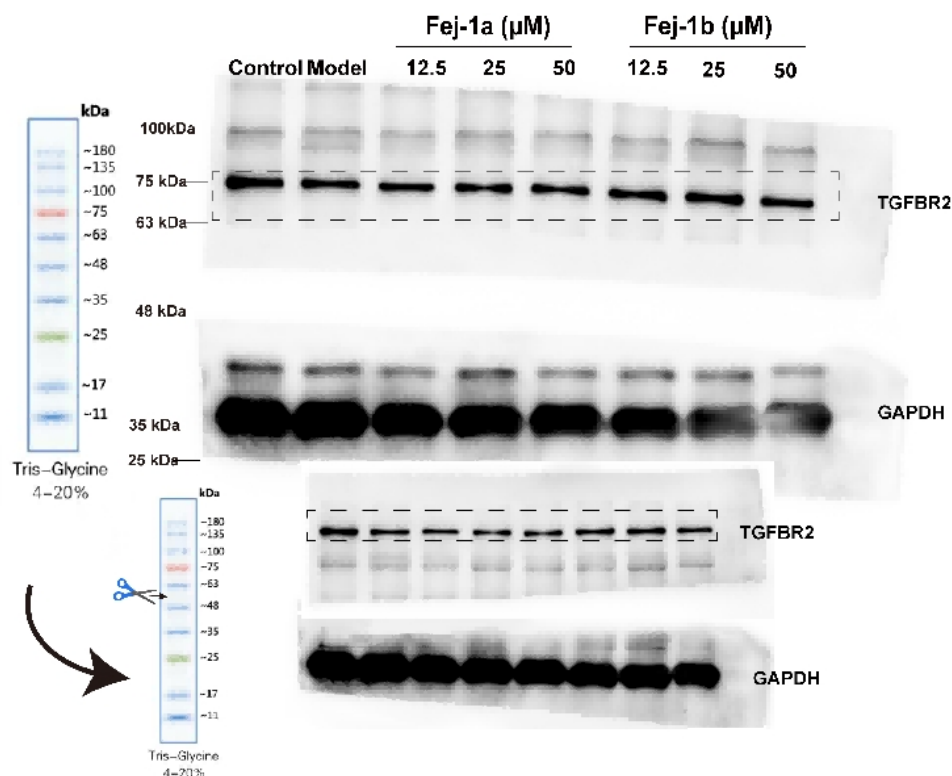


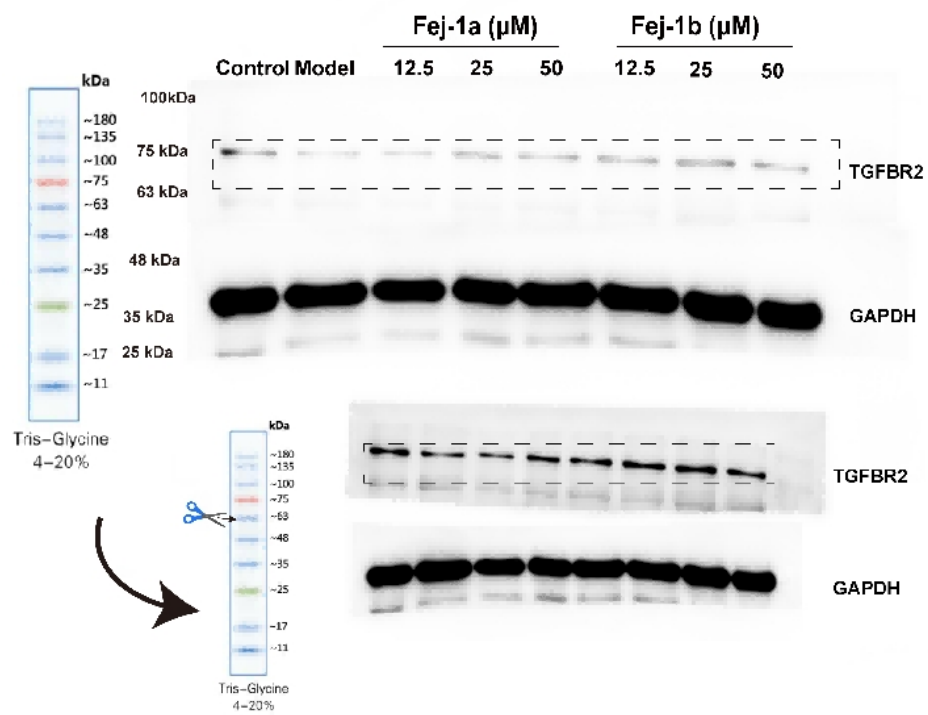


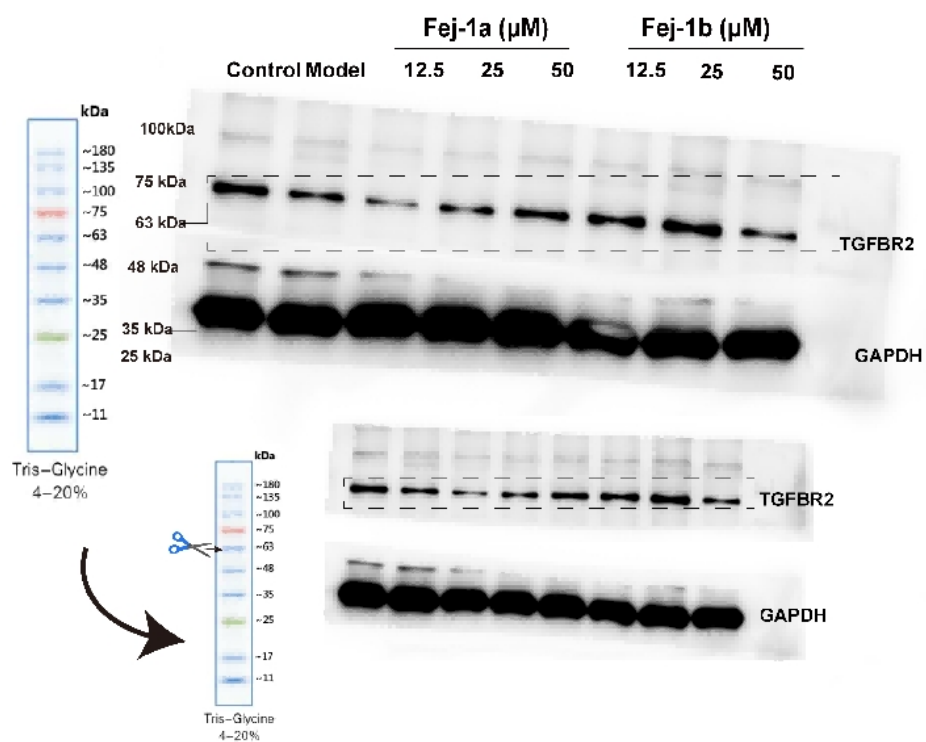




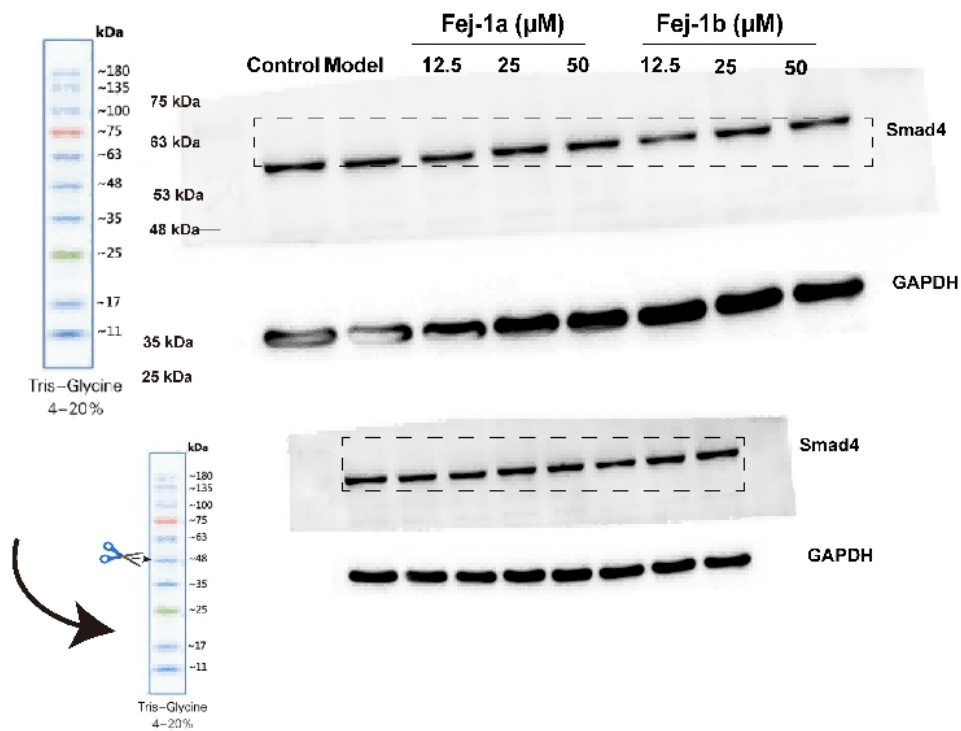
2. **Fig.6. (D and E)** Western blot quantification of TGF- β signaling components (TGFB β 2, Smad4, Smad2/3, p-Smad2/3) in LPS-stimulated cells. GAPDH served as loading control (n = 3). (*F and G*) Western blot and quantification of TAK1, I κ B α and NF- κ B activation (p-p65/p65 ratio) in LPS-stimulated cells. β -actin (1:1000, Beyotime, AF5003), GAPDH (1:2000, Beyotime, AF1186), and α -Tubulin (1:2000, Affinity, AF7010) (1) TGFB β 2 (1:1000, Abcam, ab184948)

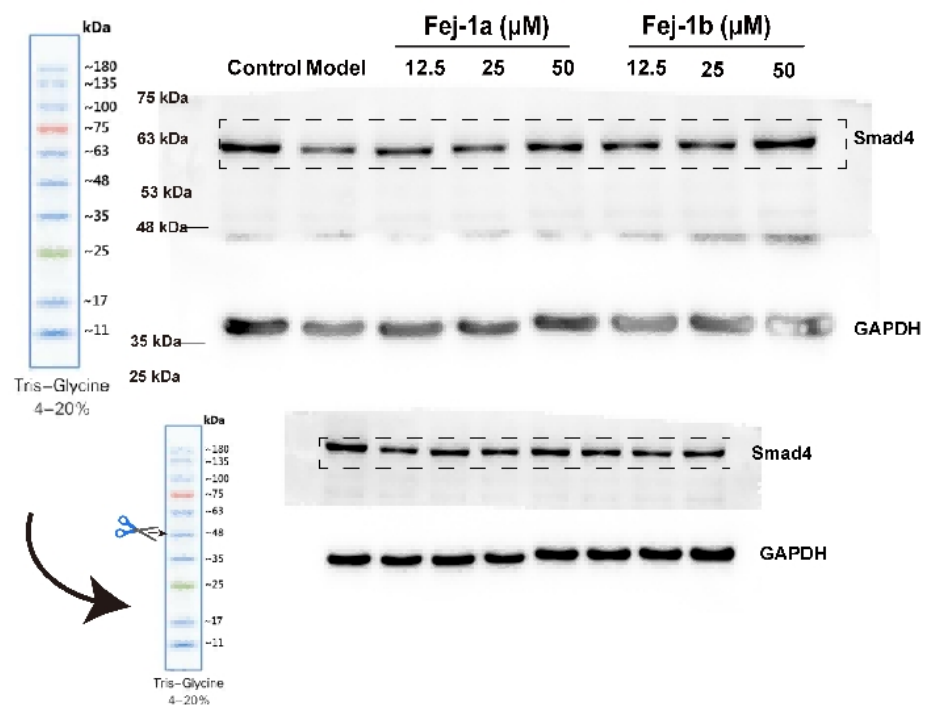


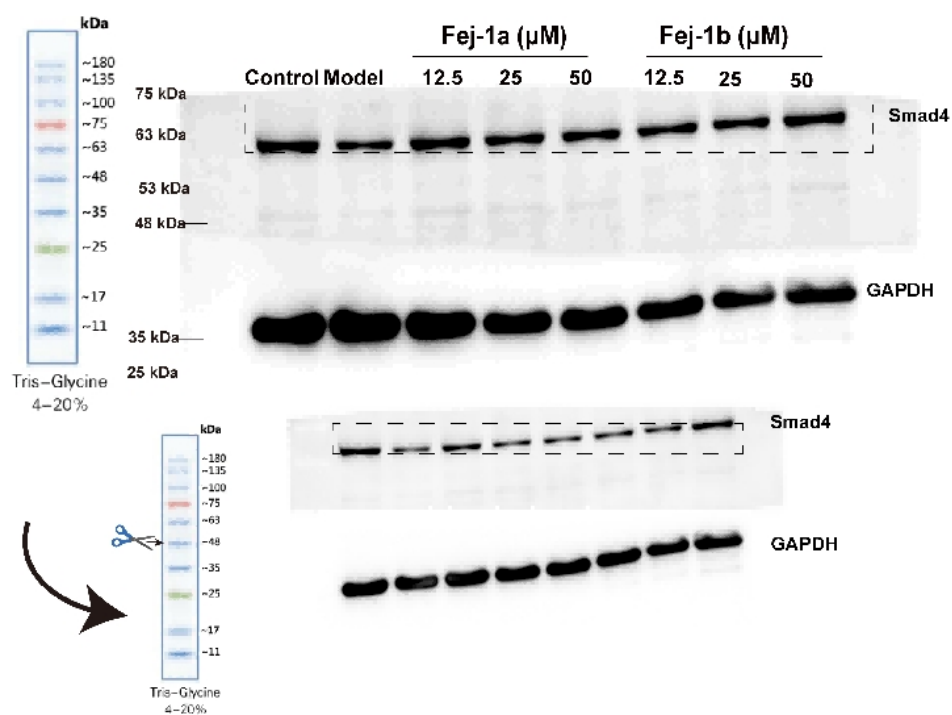




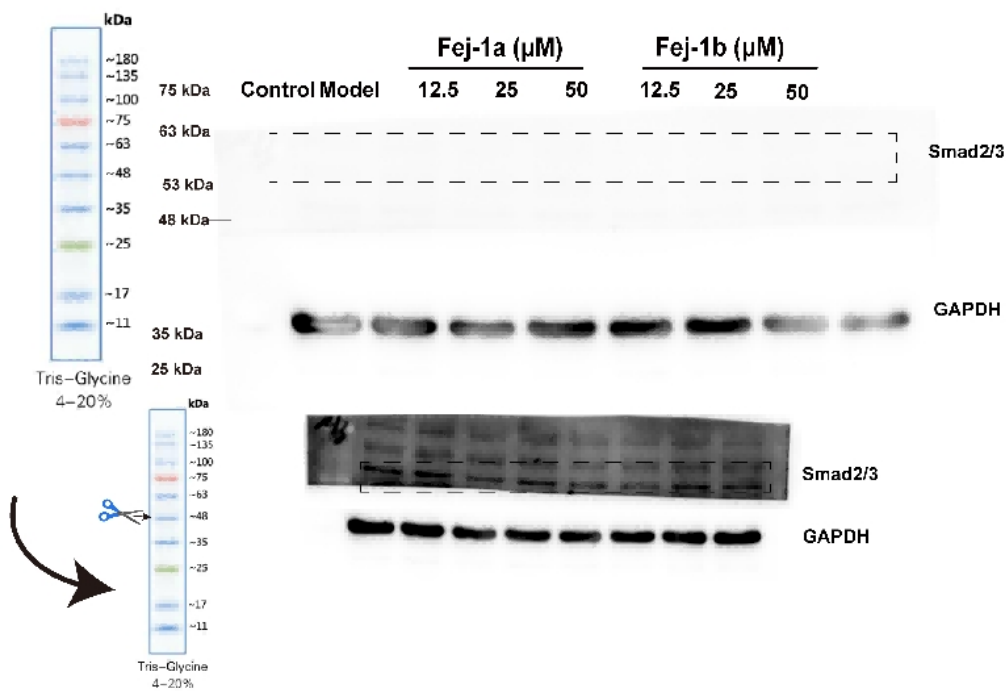
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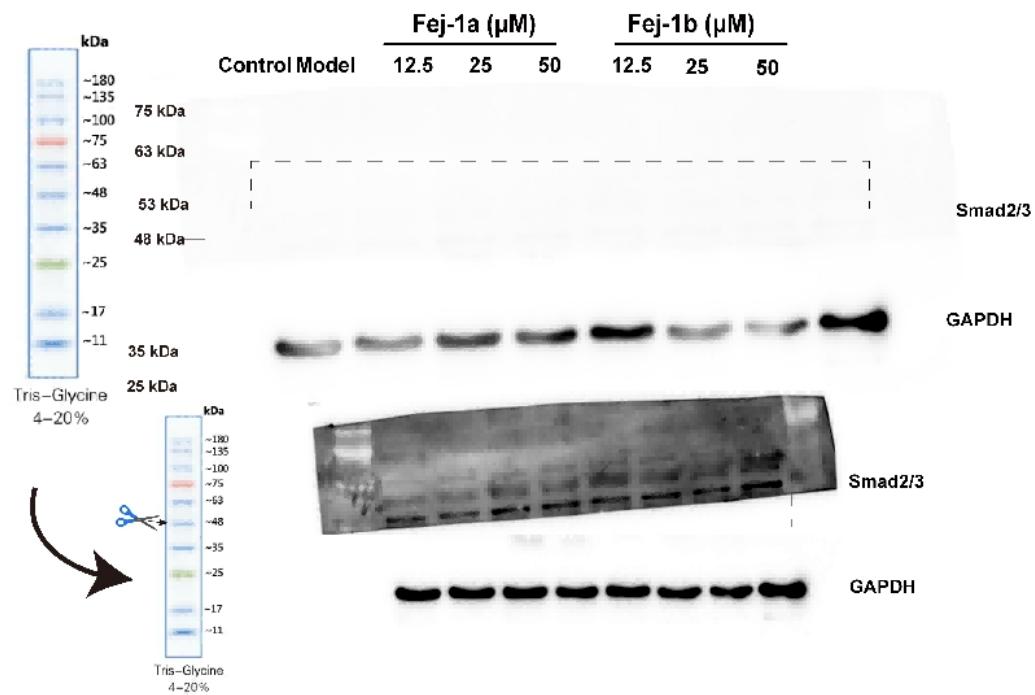


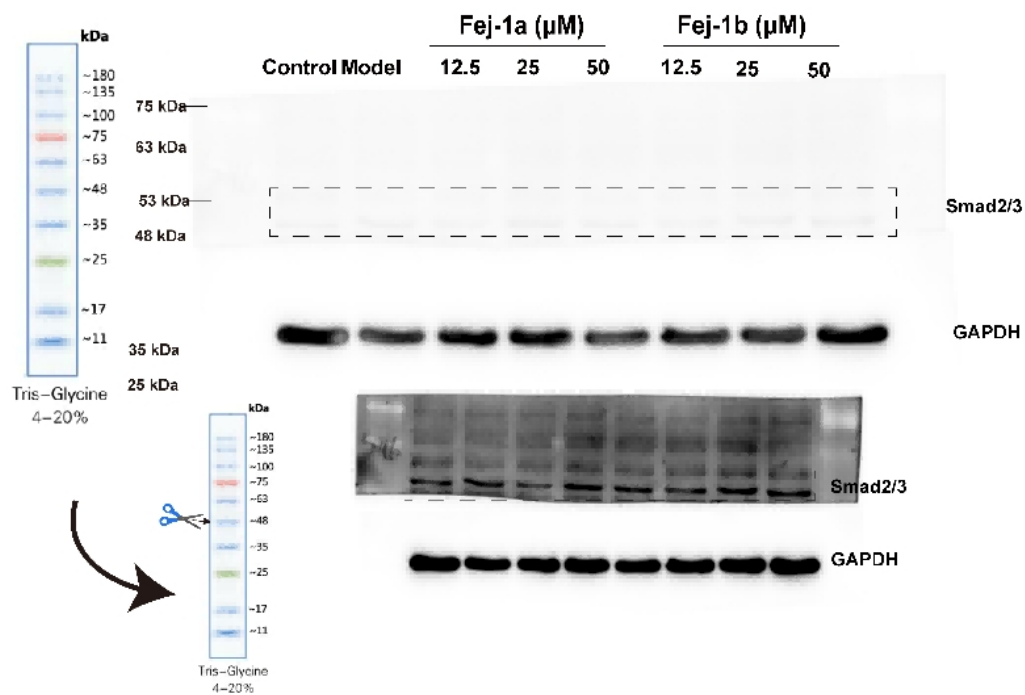




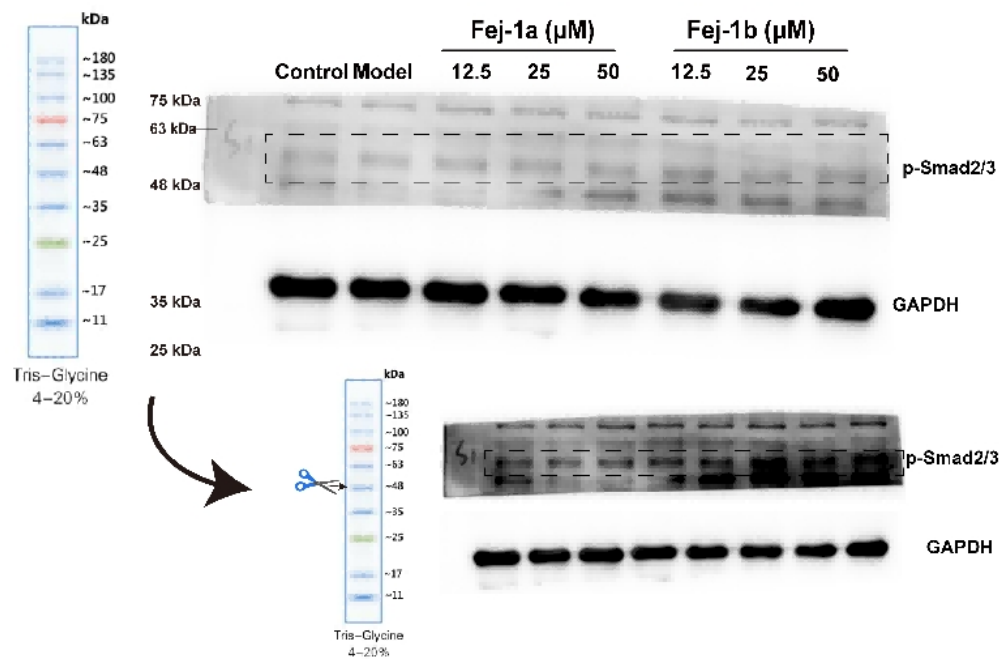
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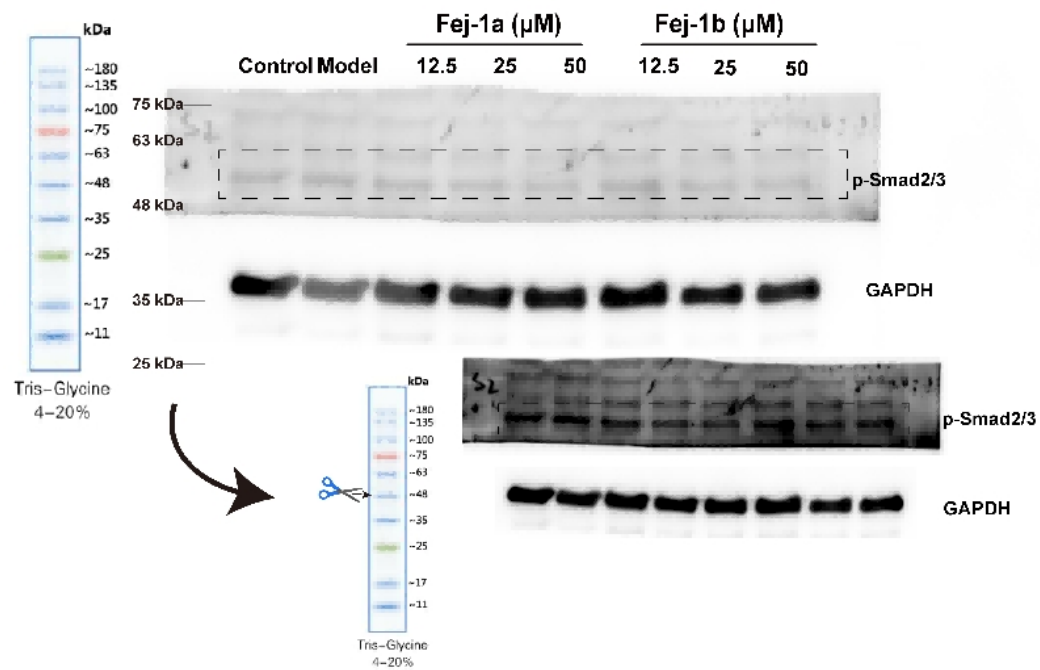


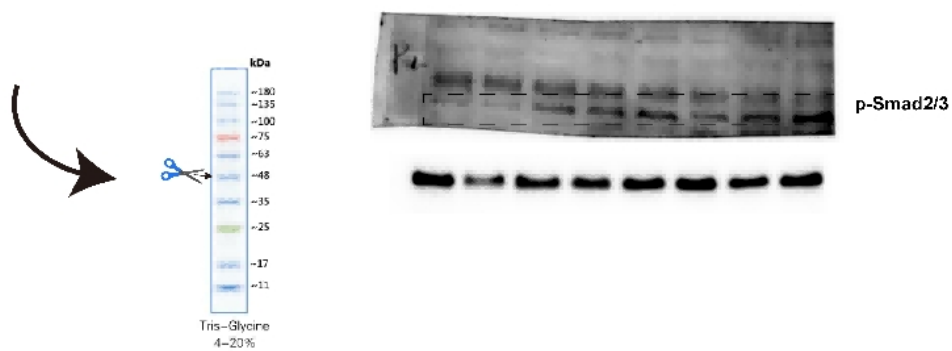
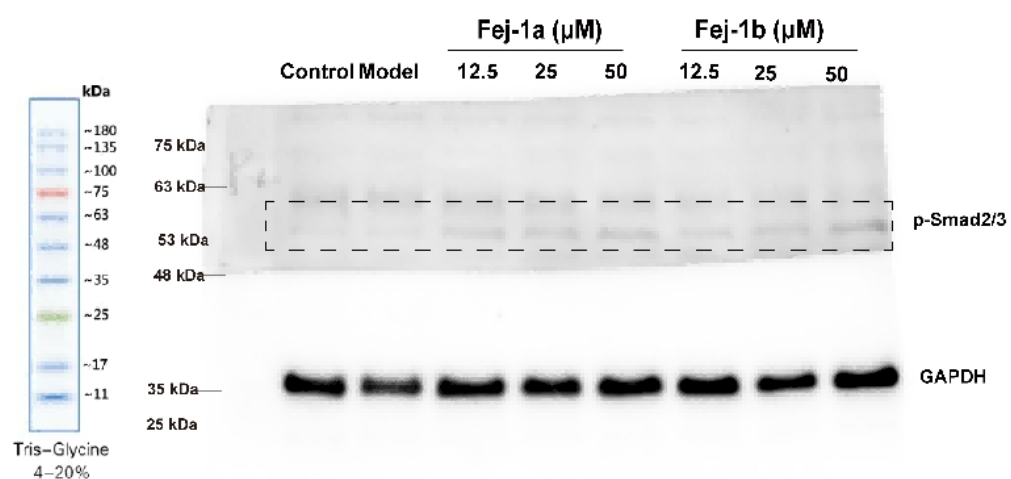




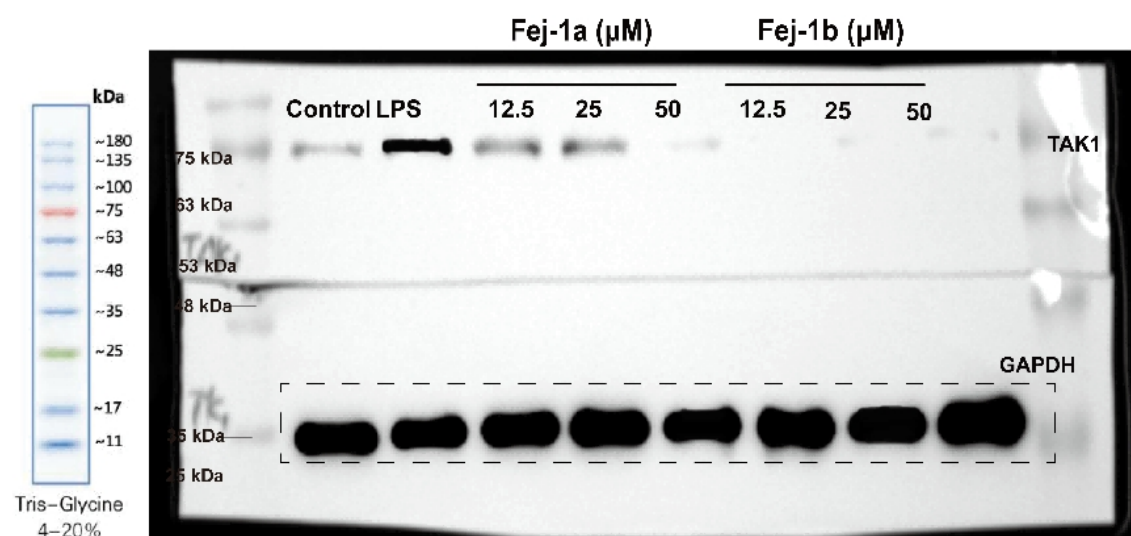
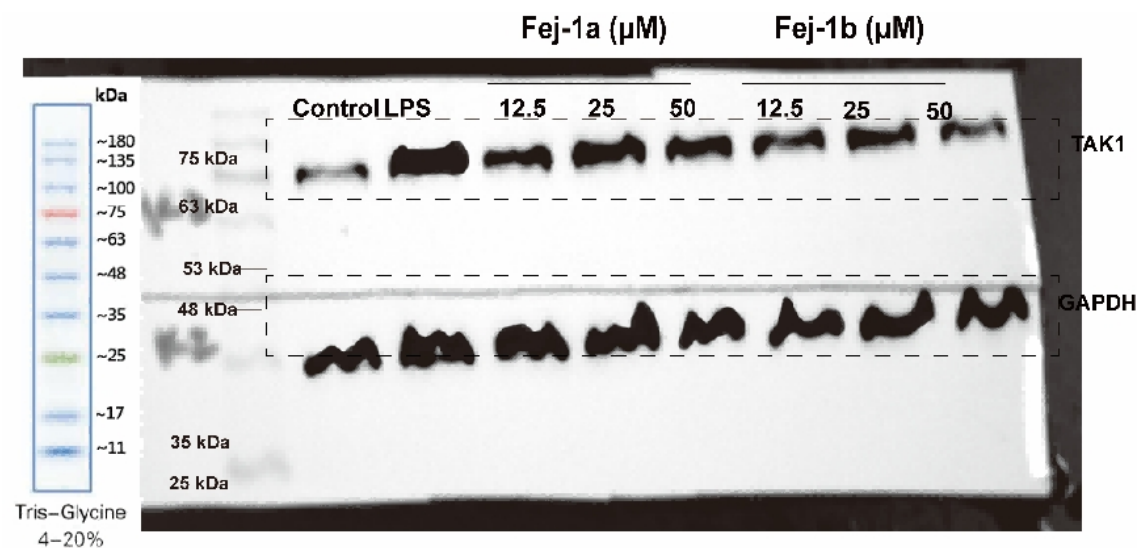
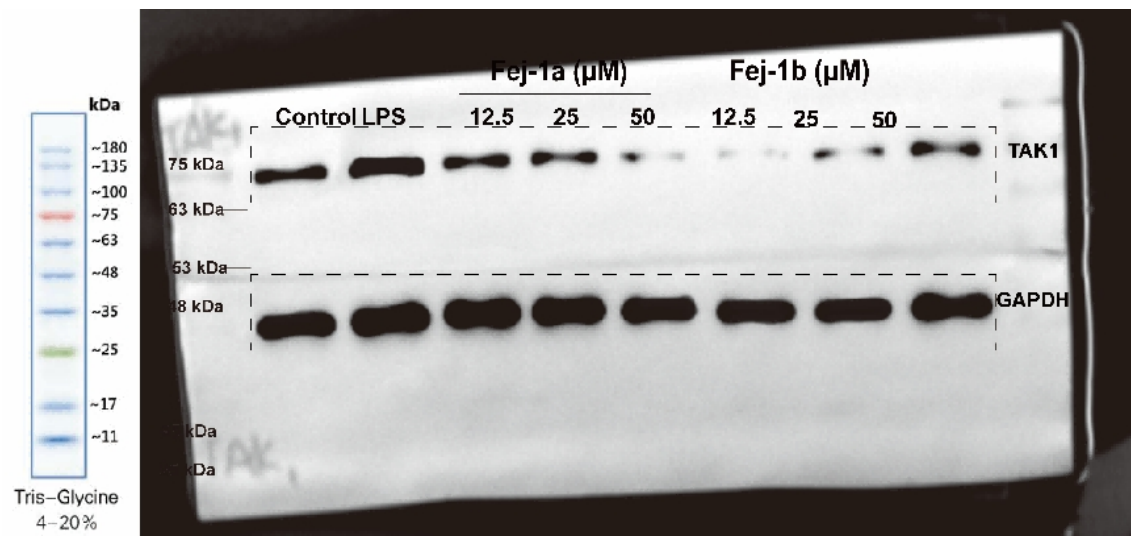
(4) Phospho-Smad2/3 (1:1000, Abcam, ab63399)



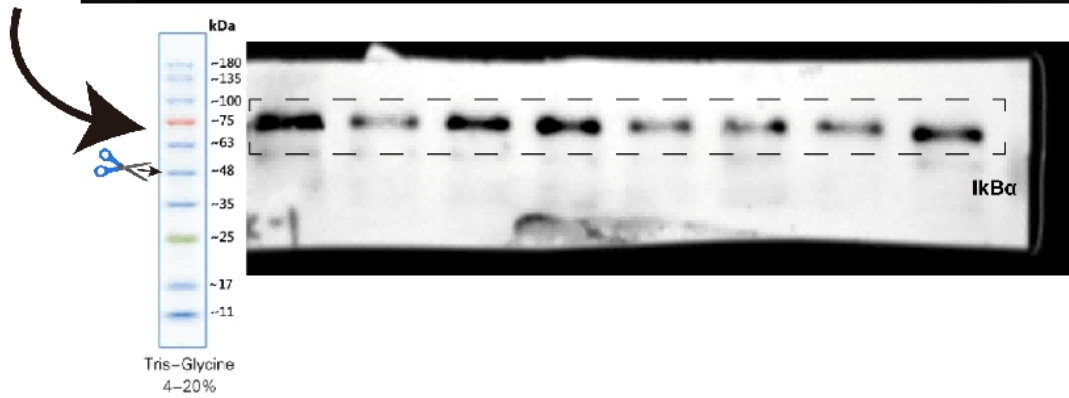
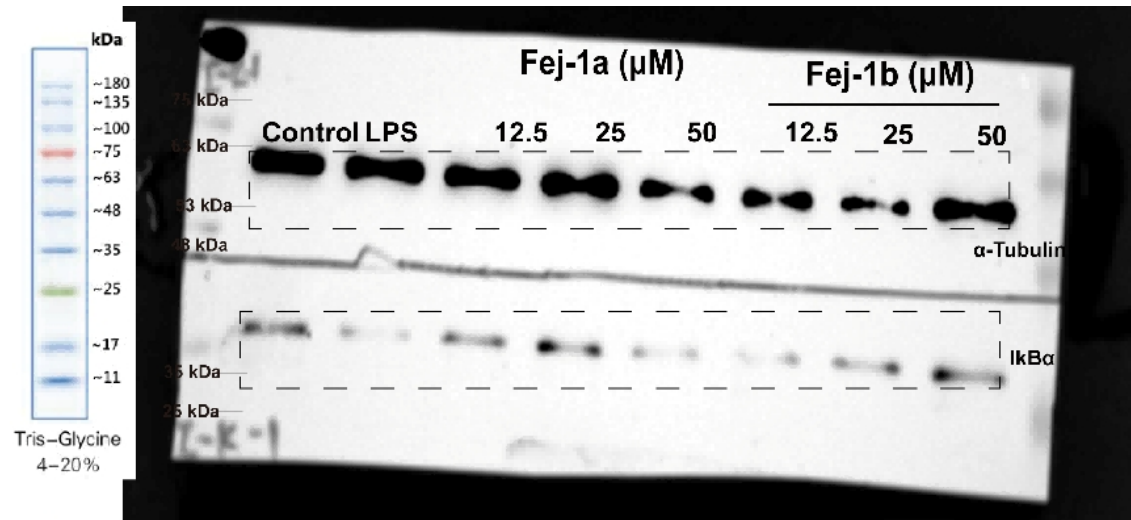


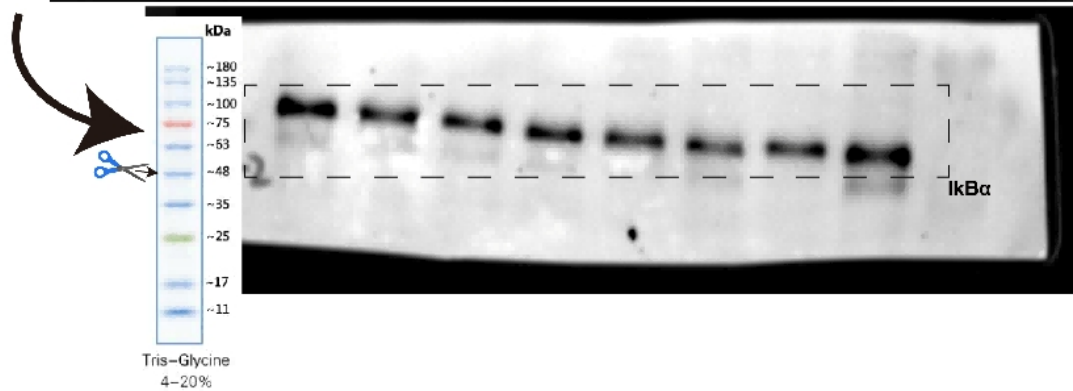
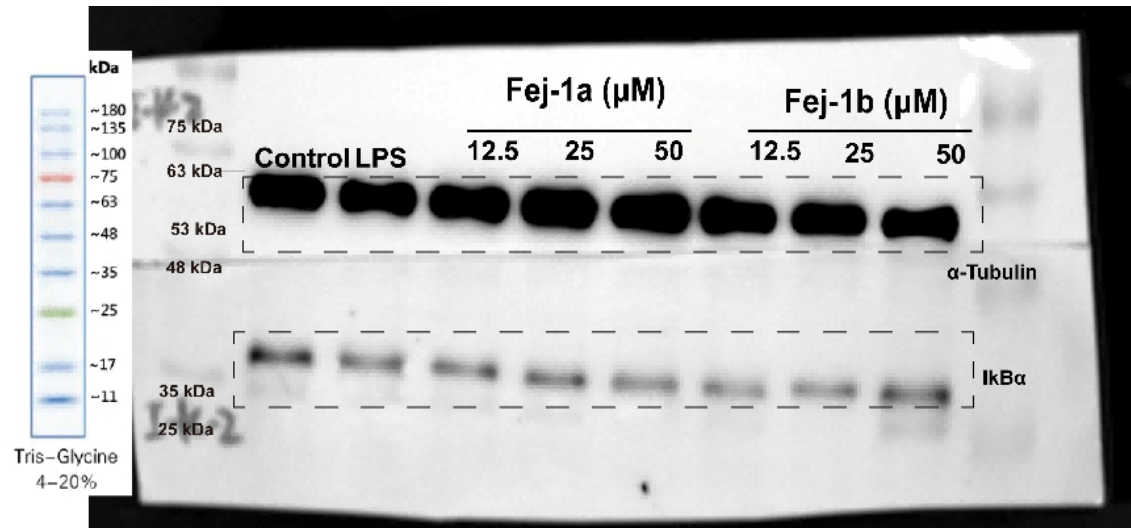


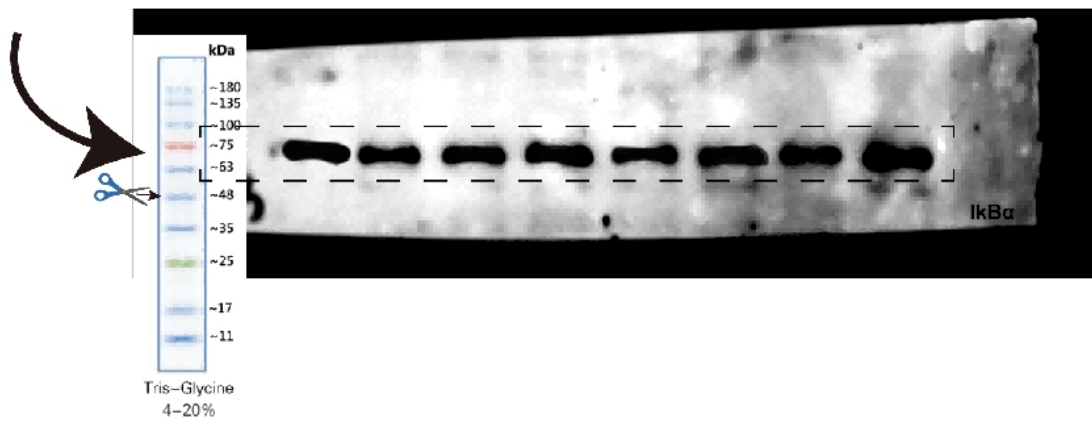
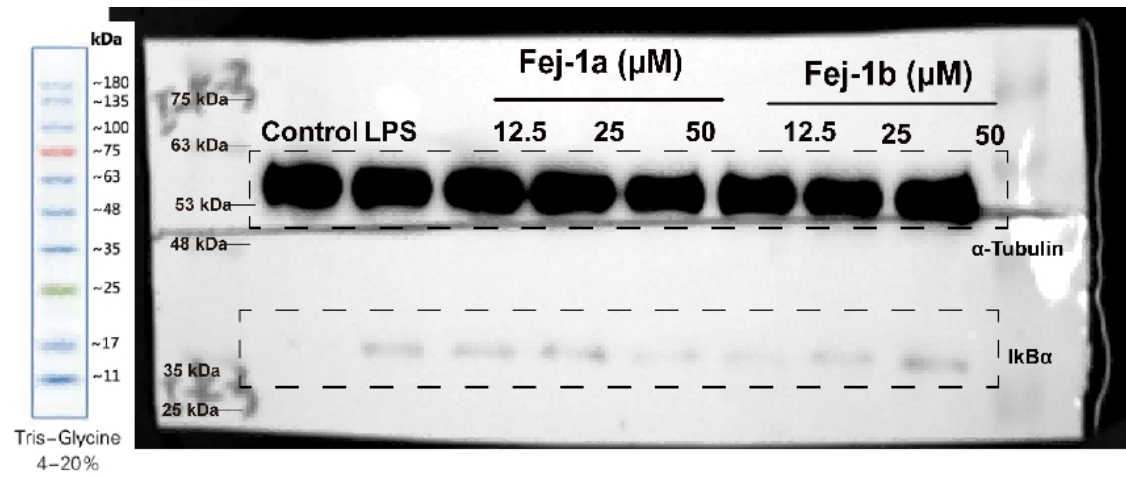
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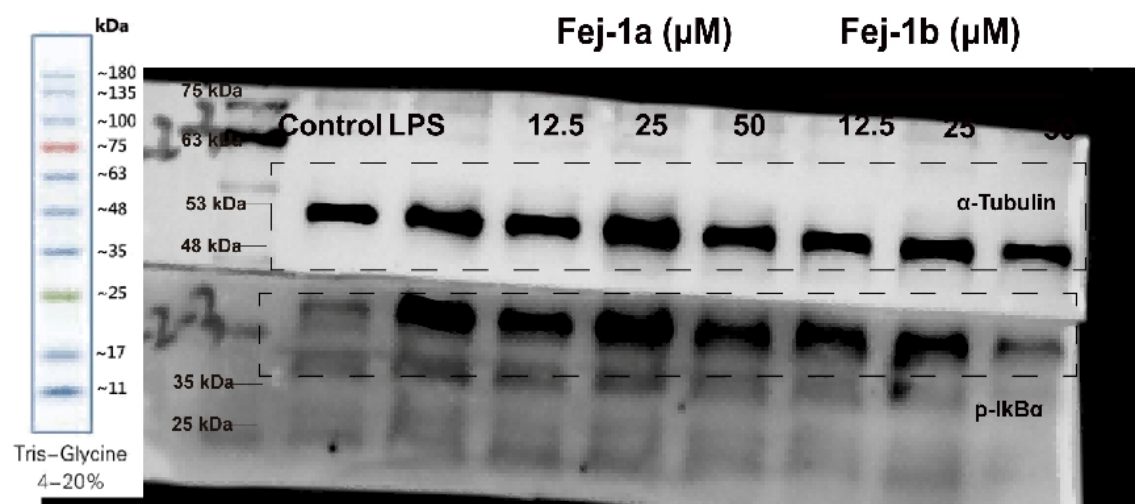
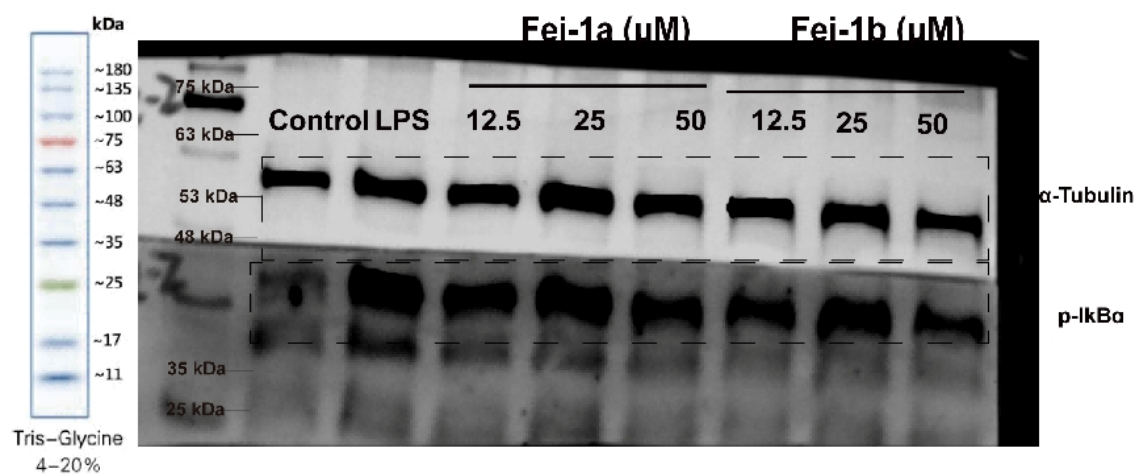
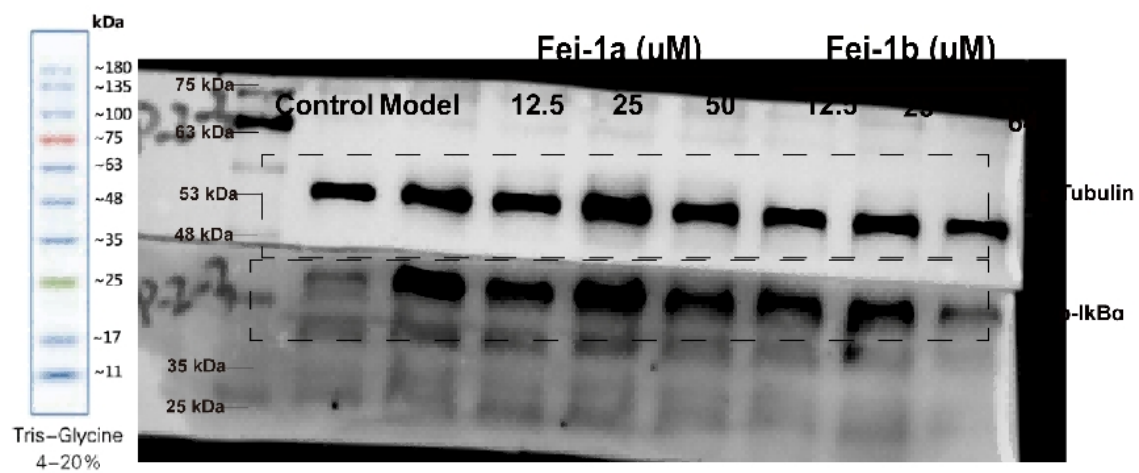
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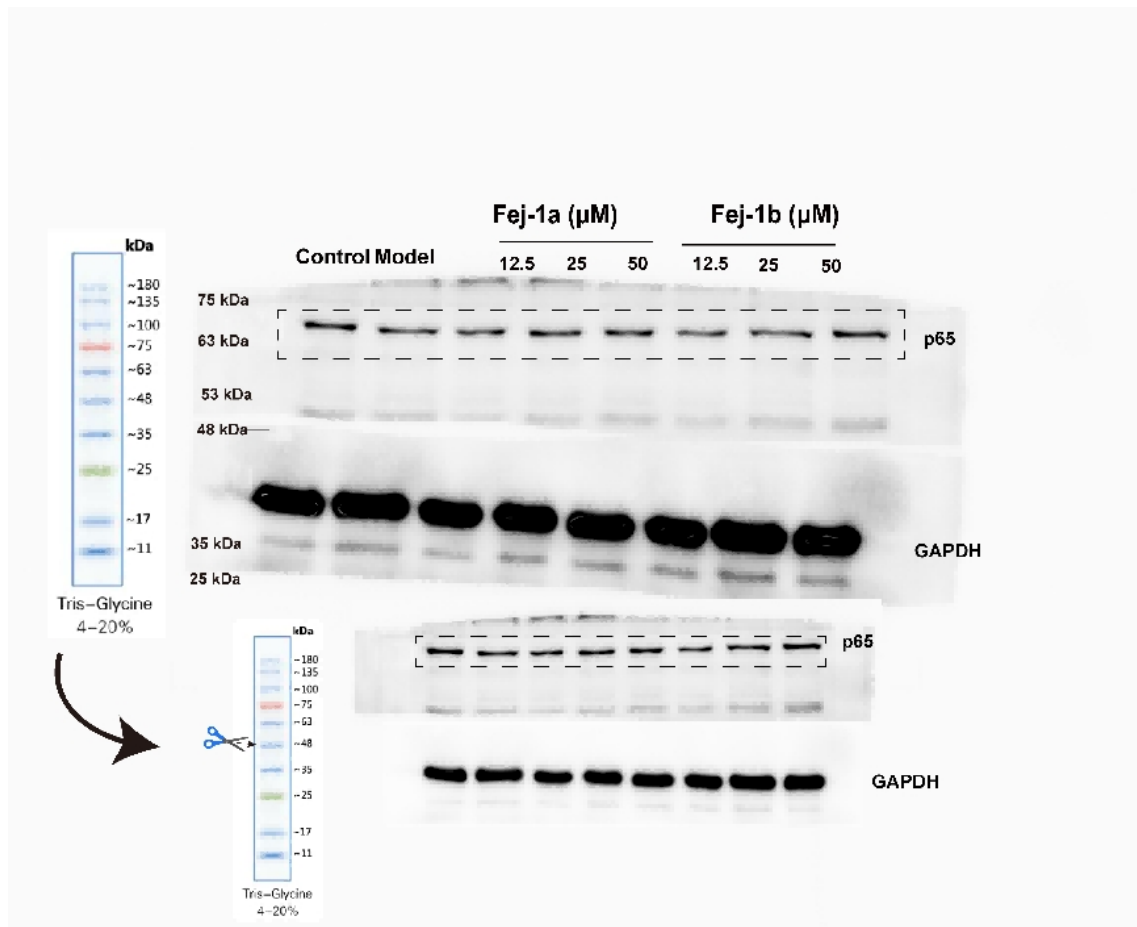


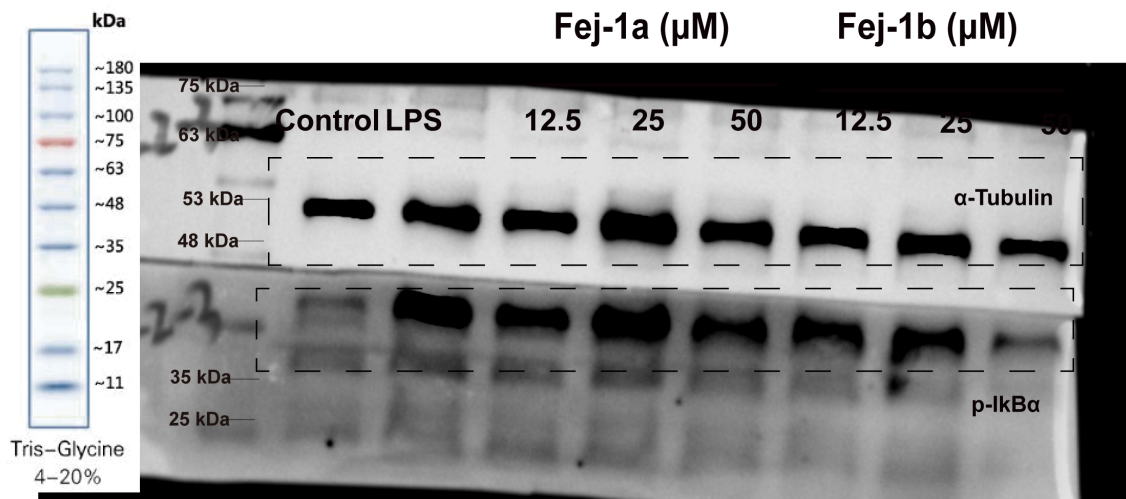
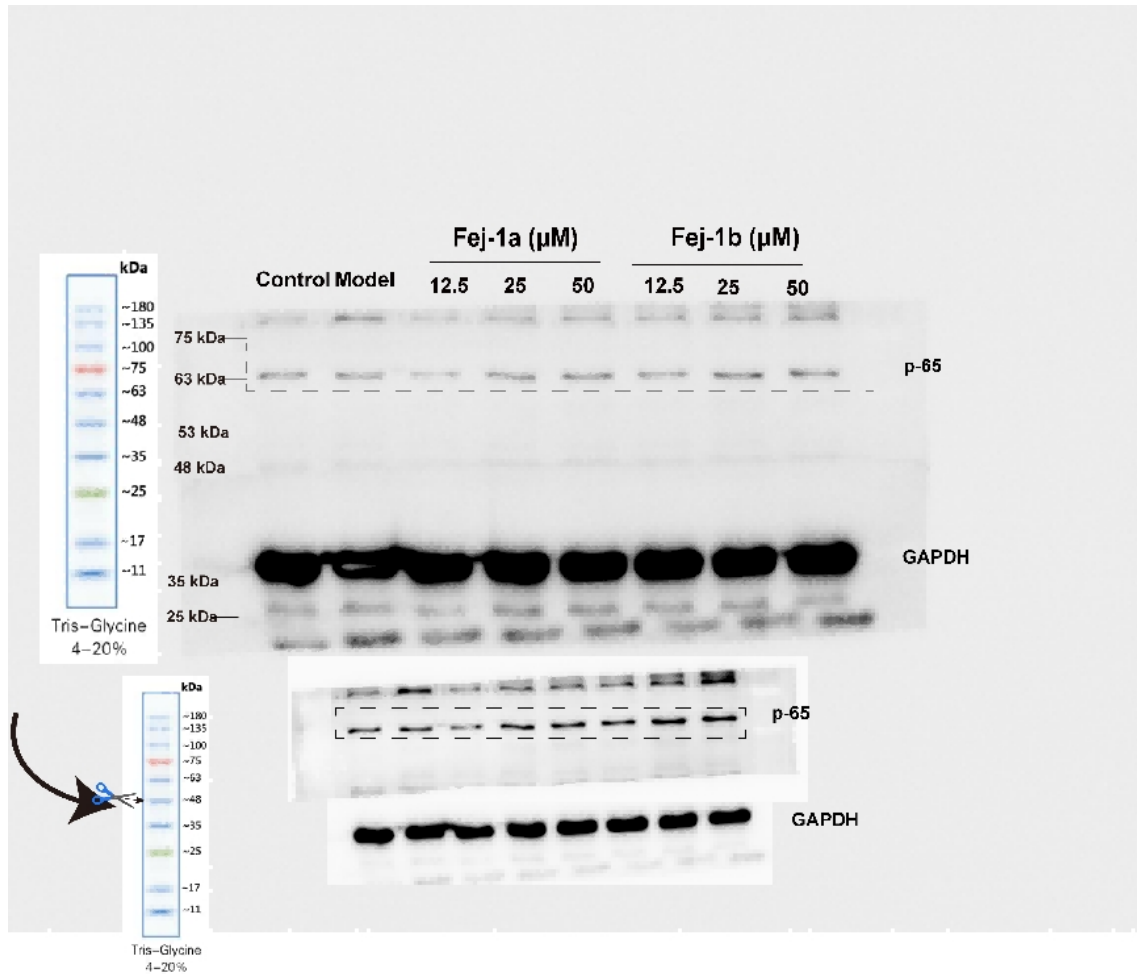


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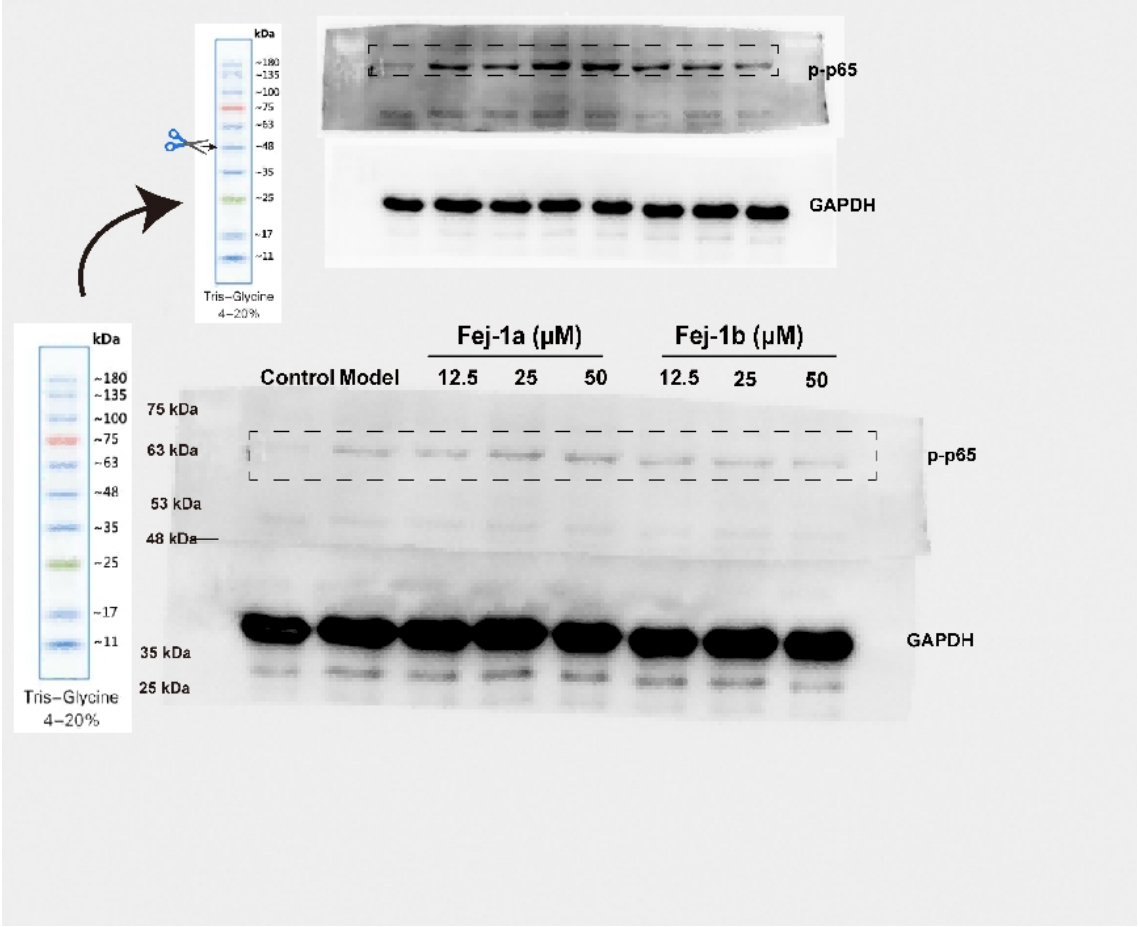


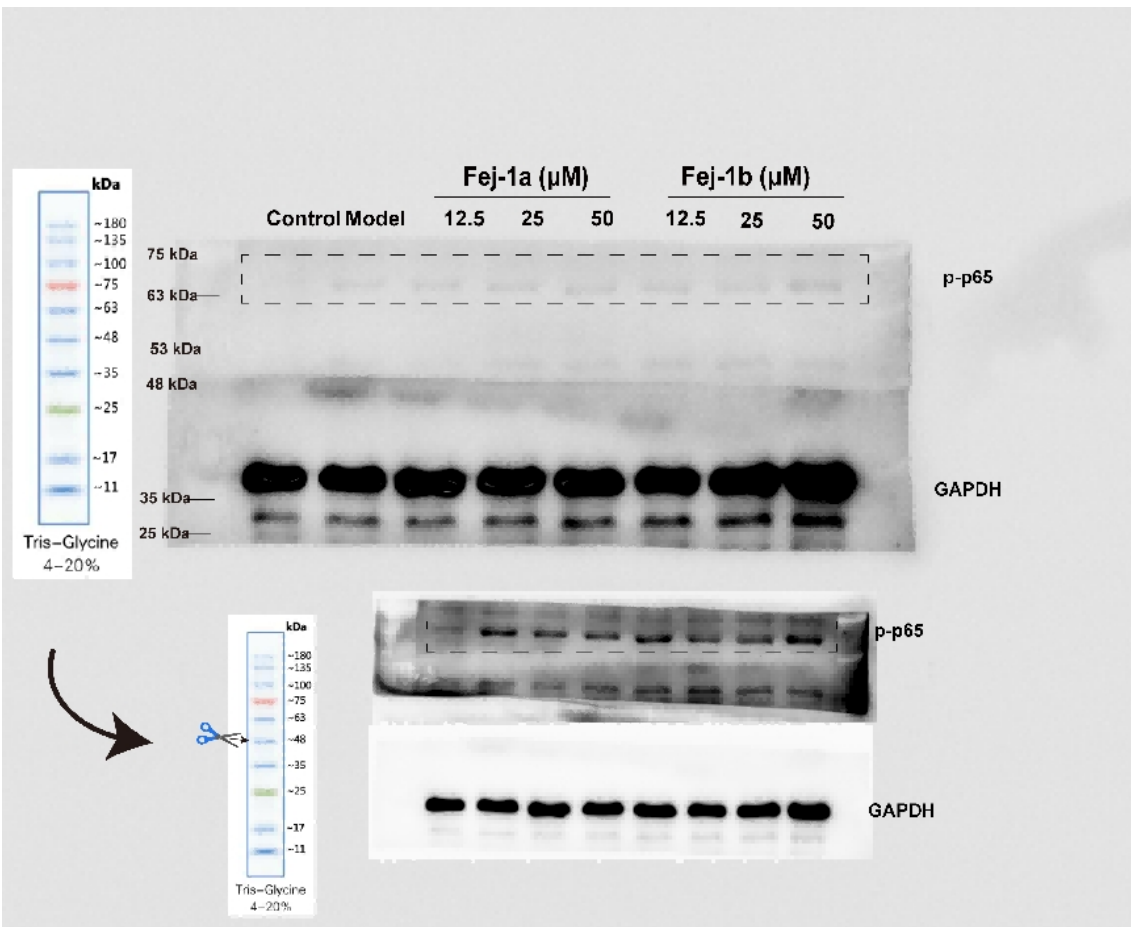
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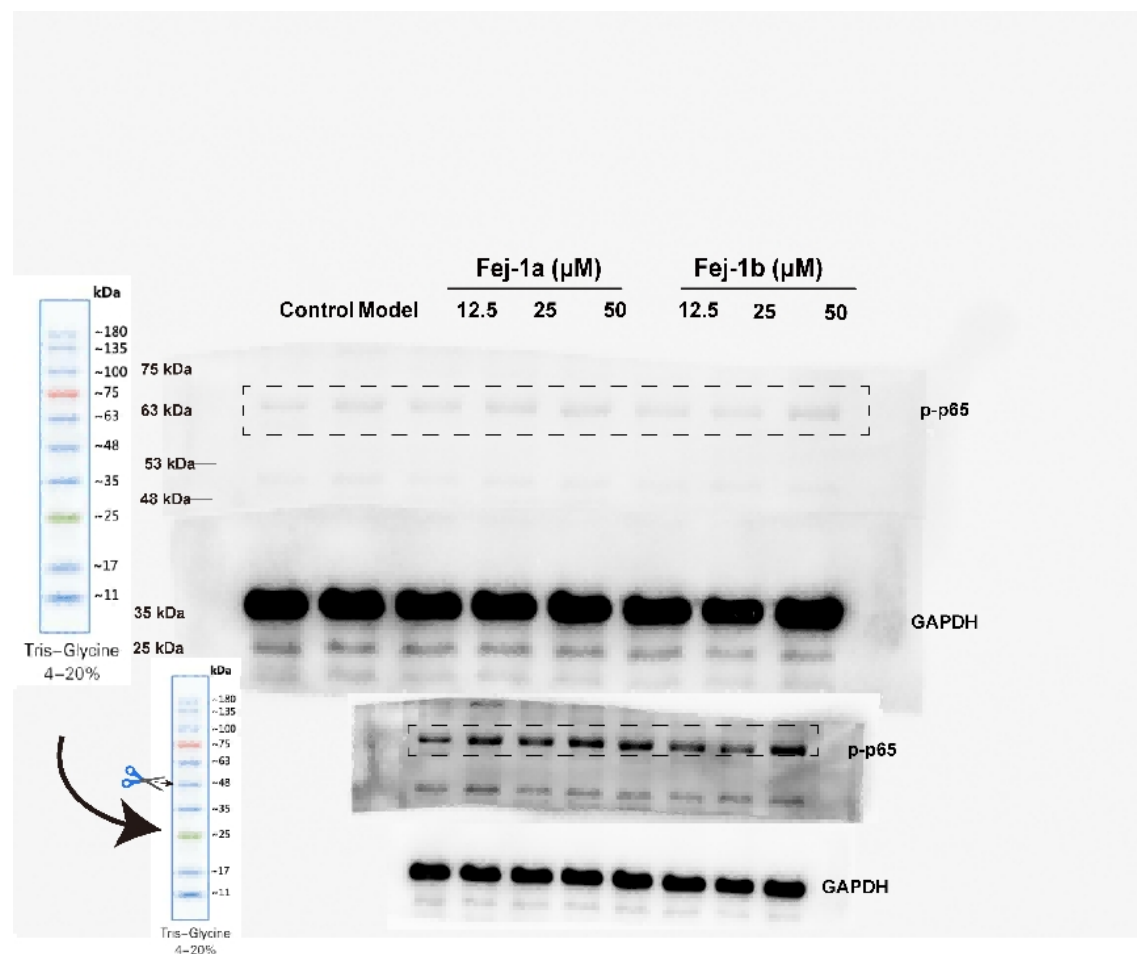




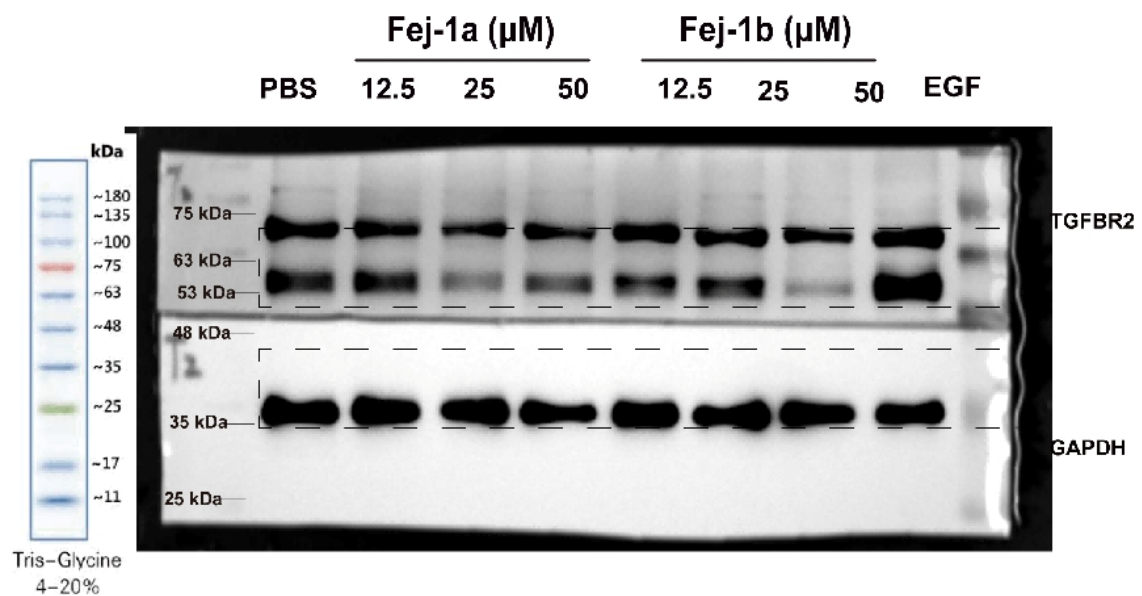
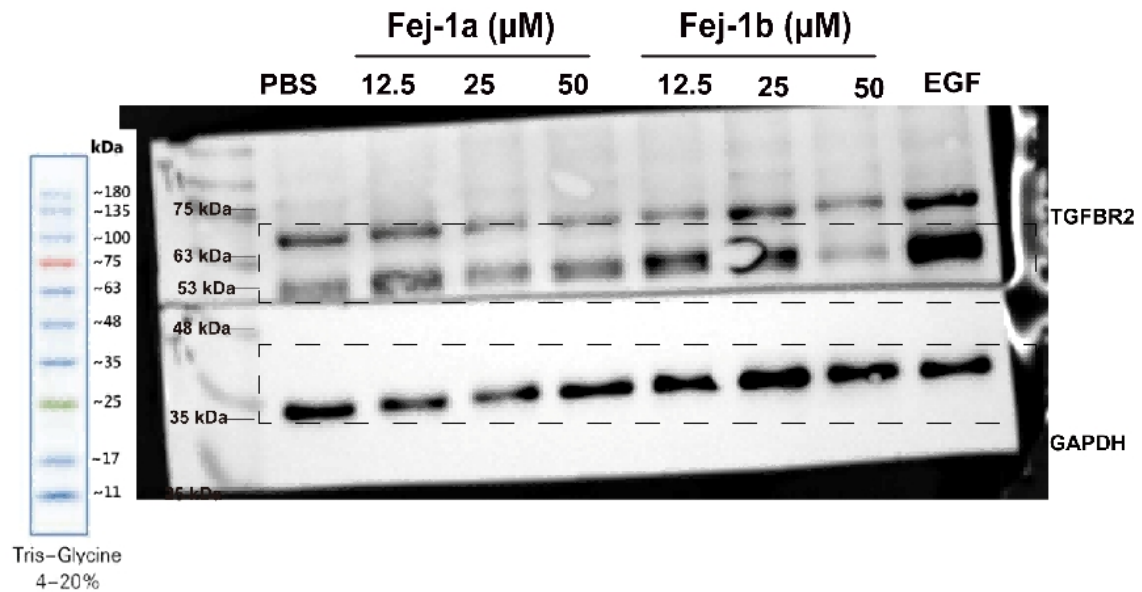
(9) Phospho-p65 (1:1000, Beyotime, AN371)

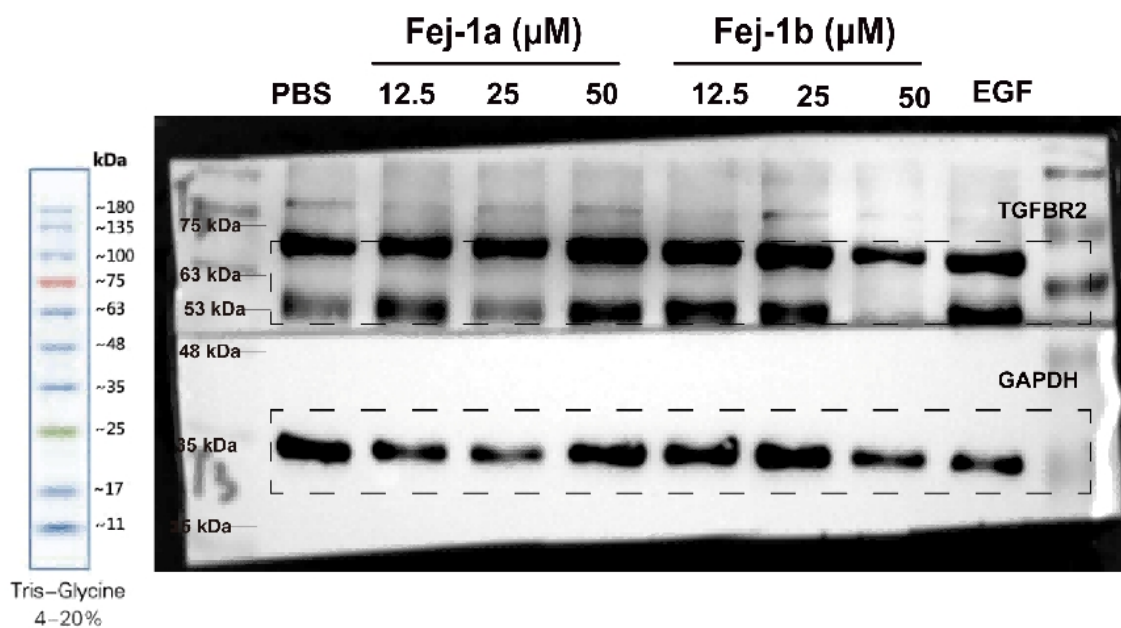




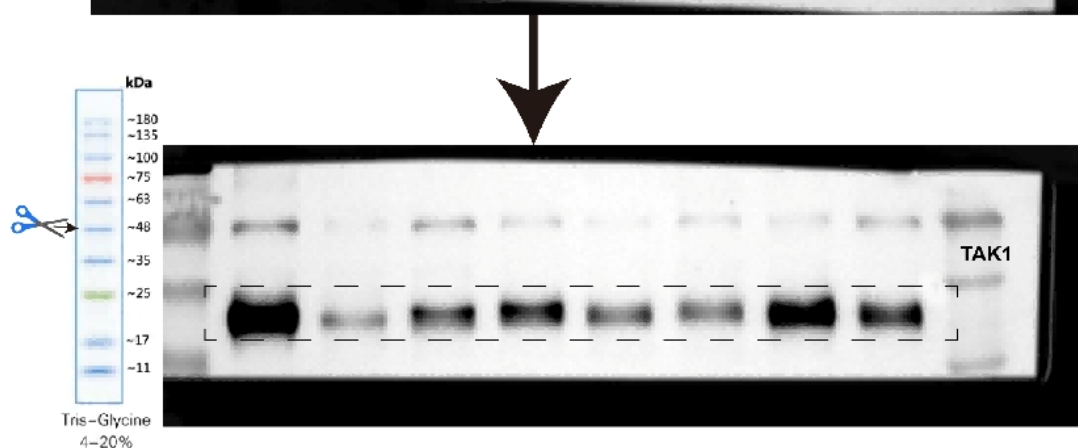
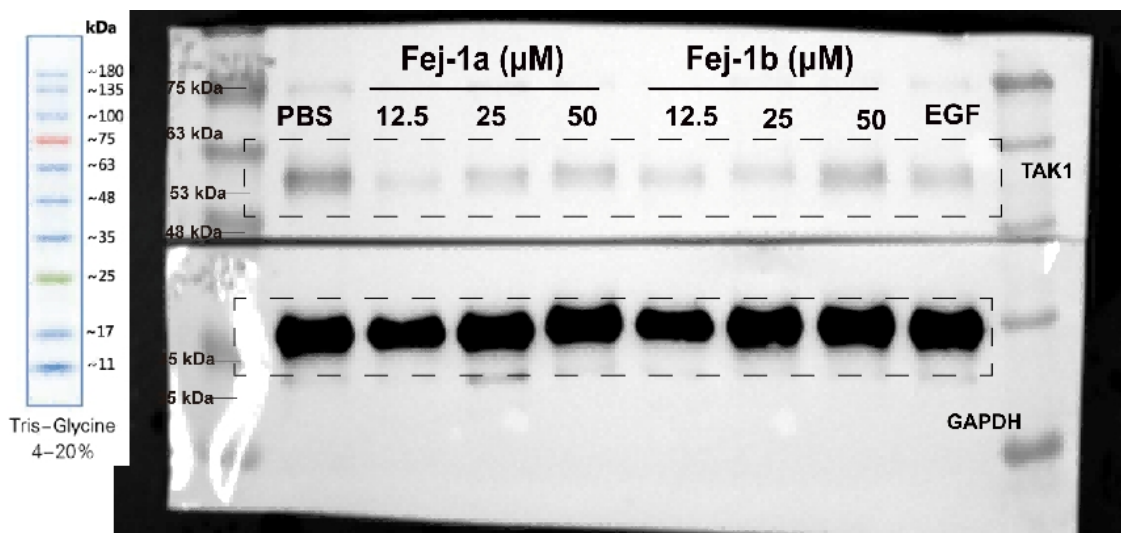


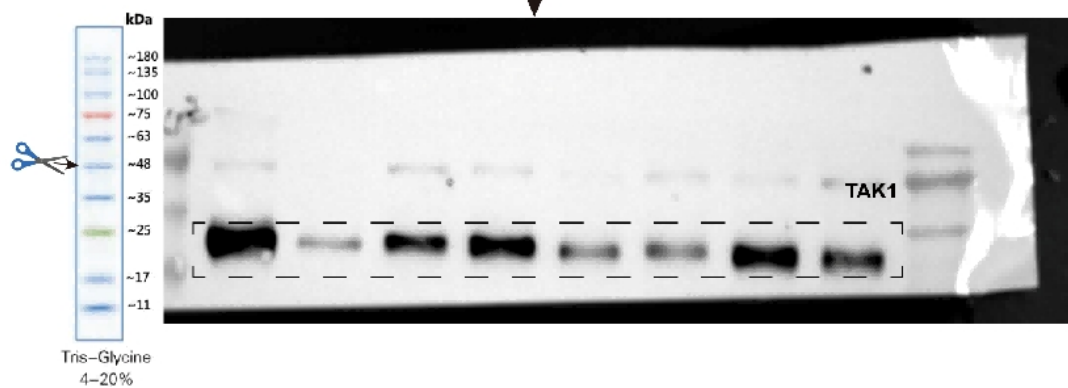
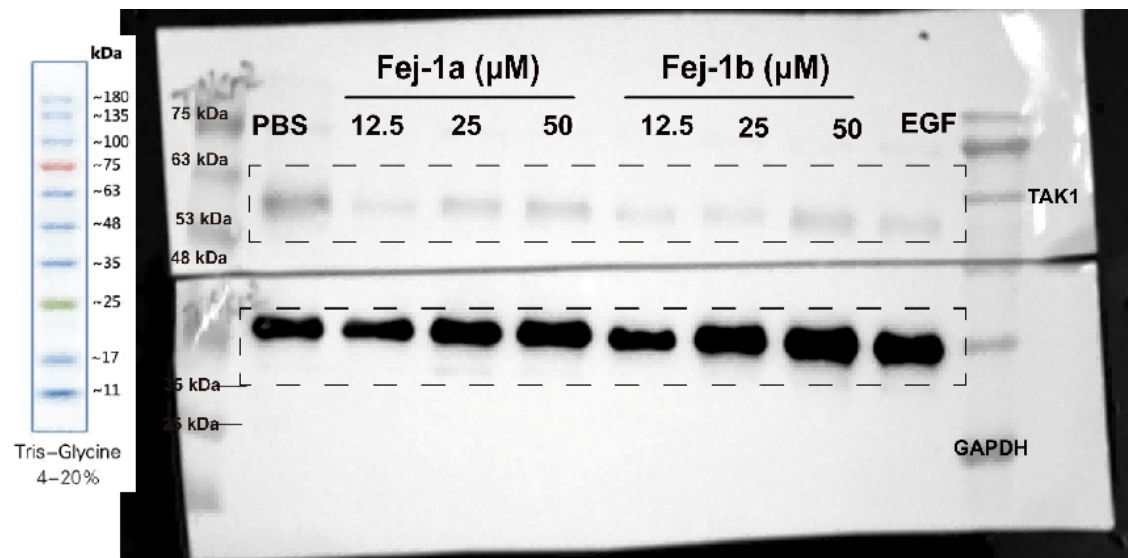
3. **Fig.8. (F and G)** Western blot analysis of TGFB β 2 expression and NF- κ B activation in mouse skin tissue after three days of Fej-1a/b treatment. β -actin (1:1000, Beyotime, AF5003), GAPDH (1:2000, Beyotime, AF1186), and α -Tubulin (1:2000, Affinity, AF7010)
(1) TGFB β 2 (1:1000, Abcam, ab184948)

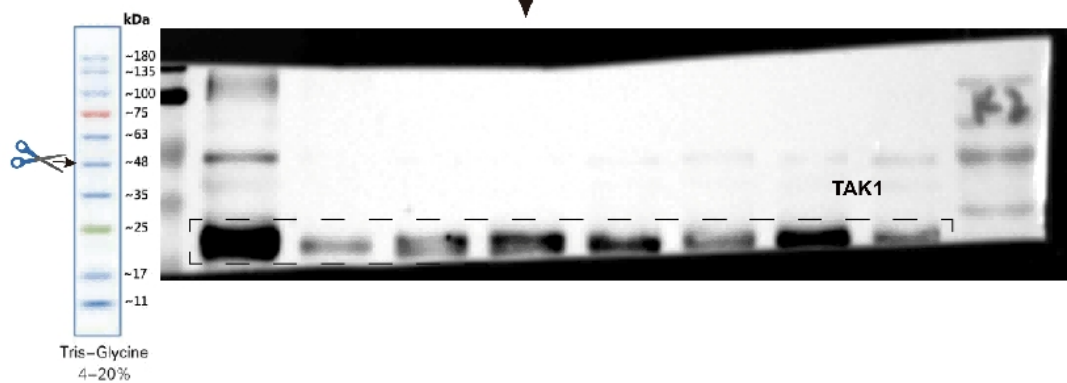




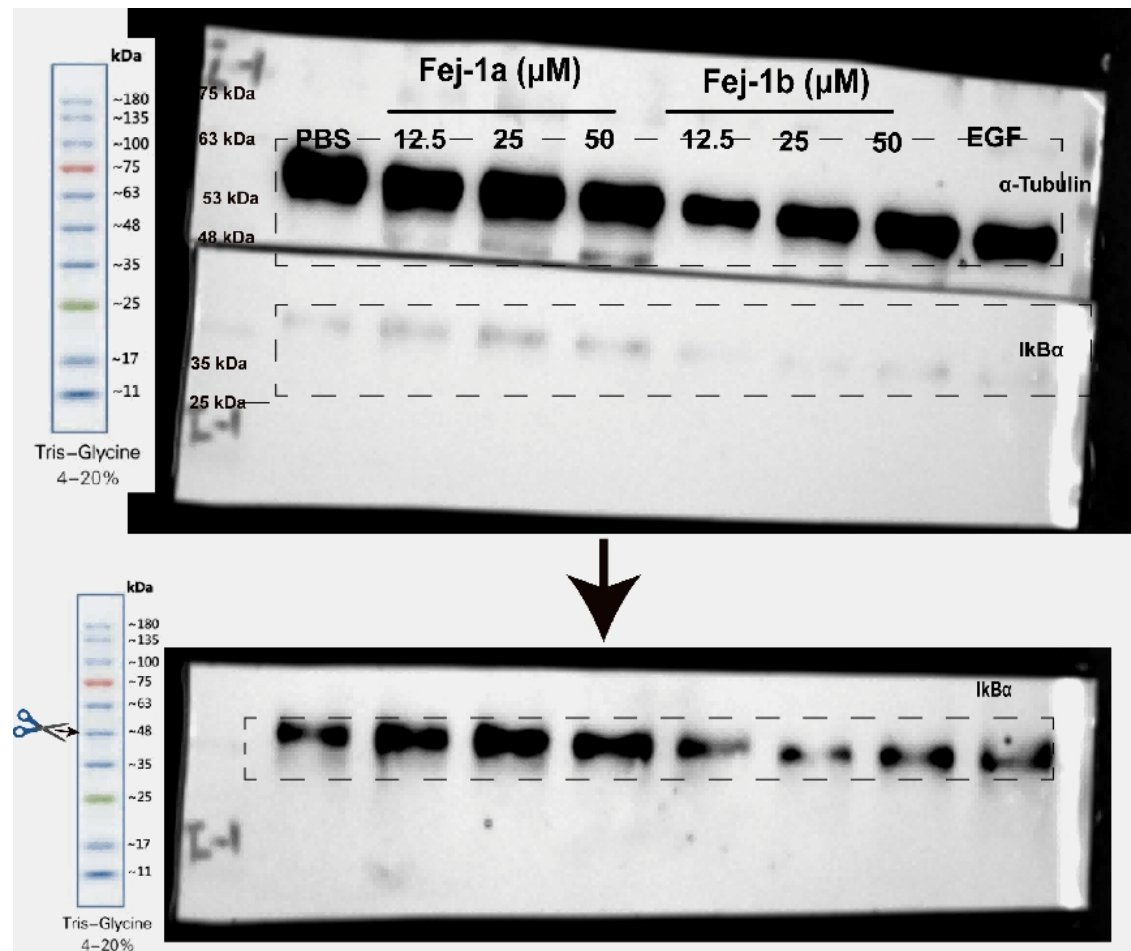
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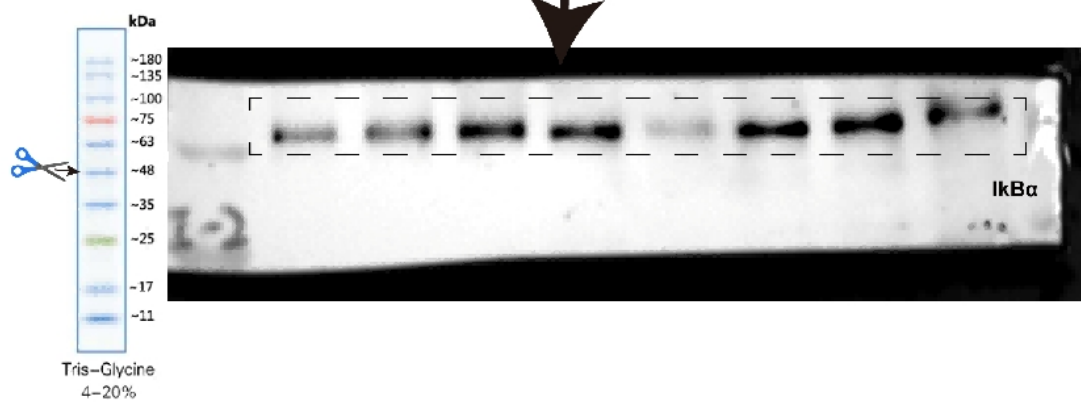
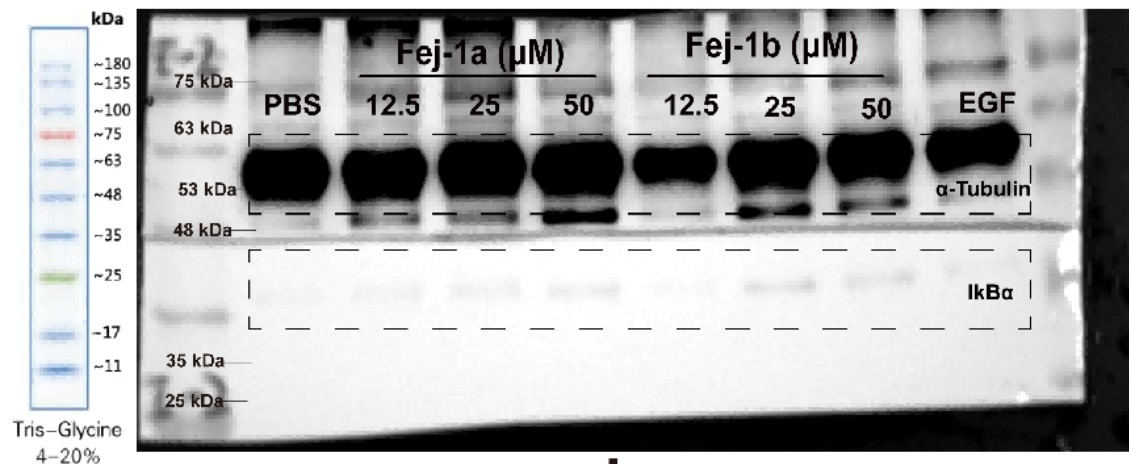


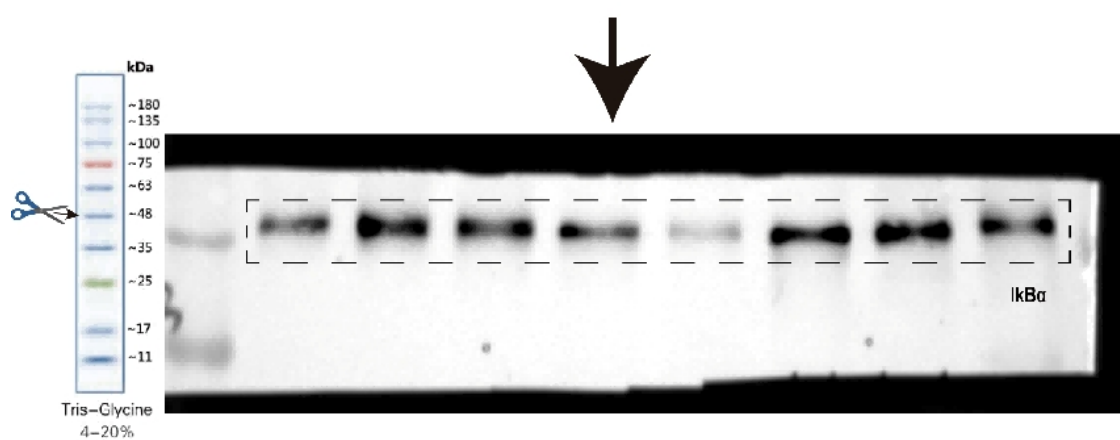
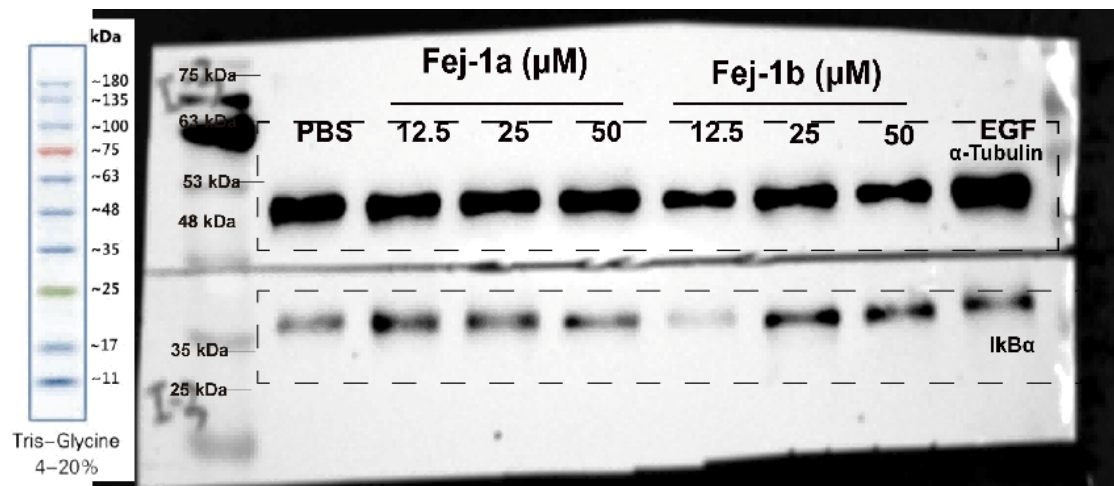




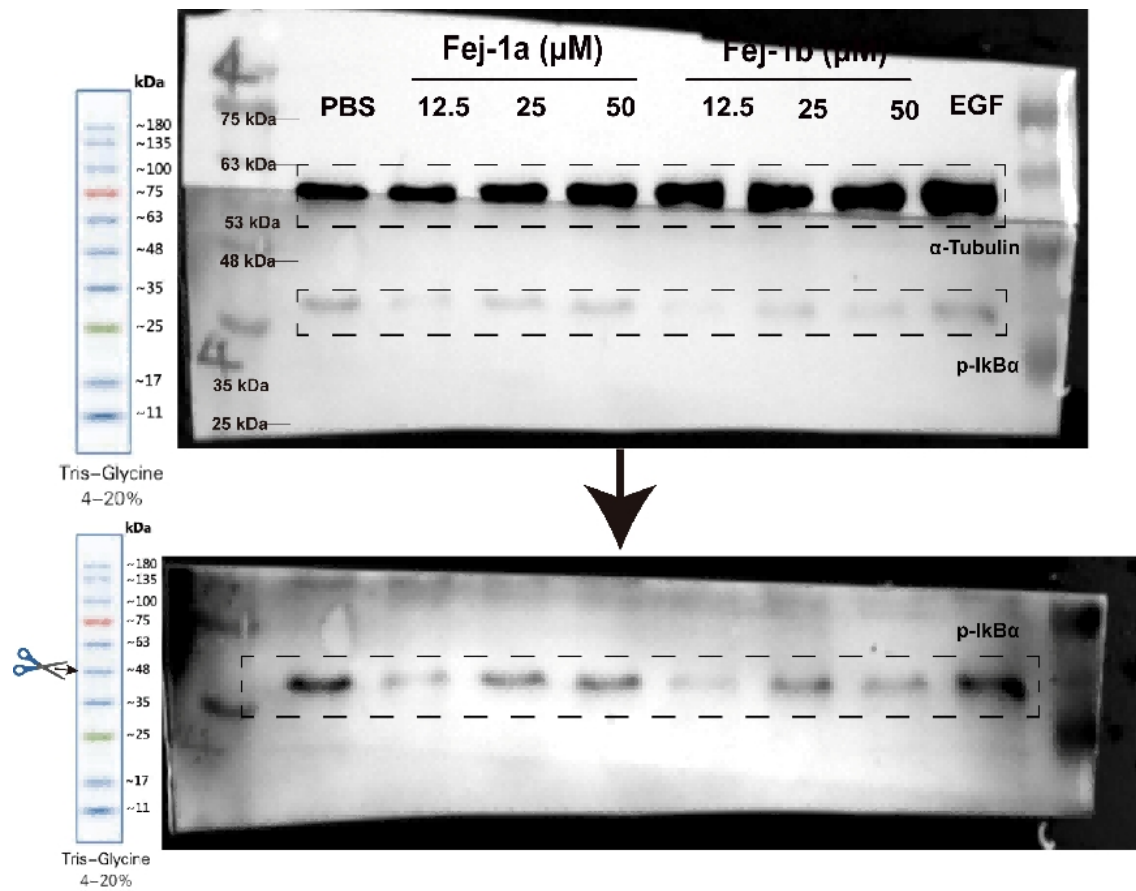
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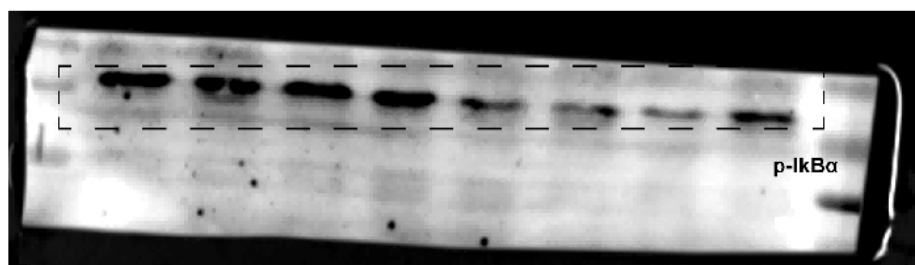
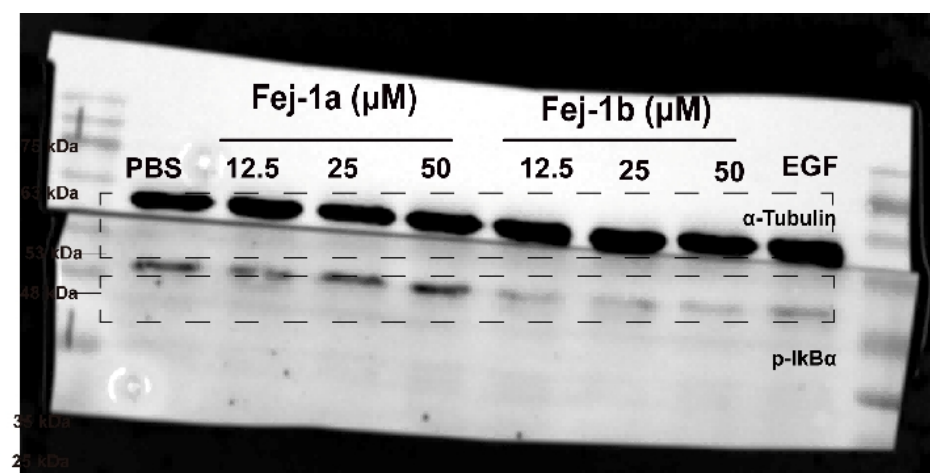
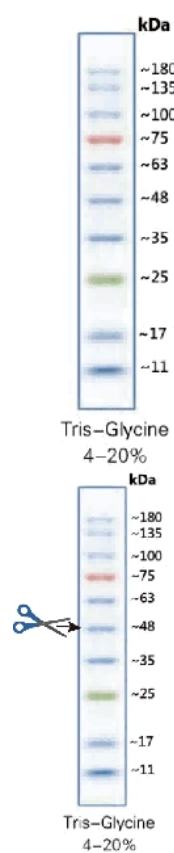


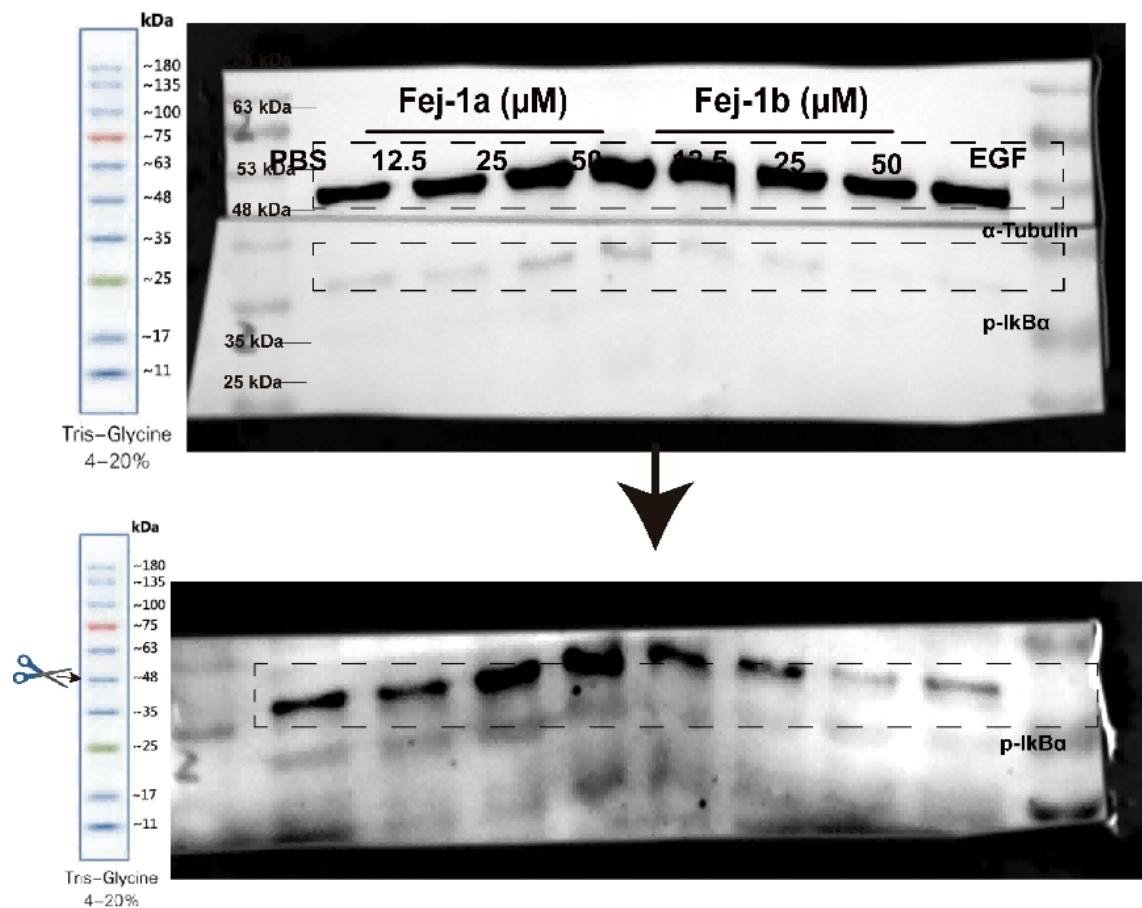




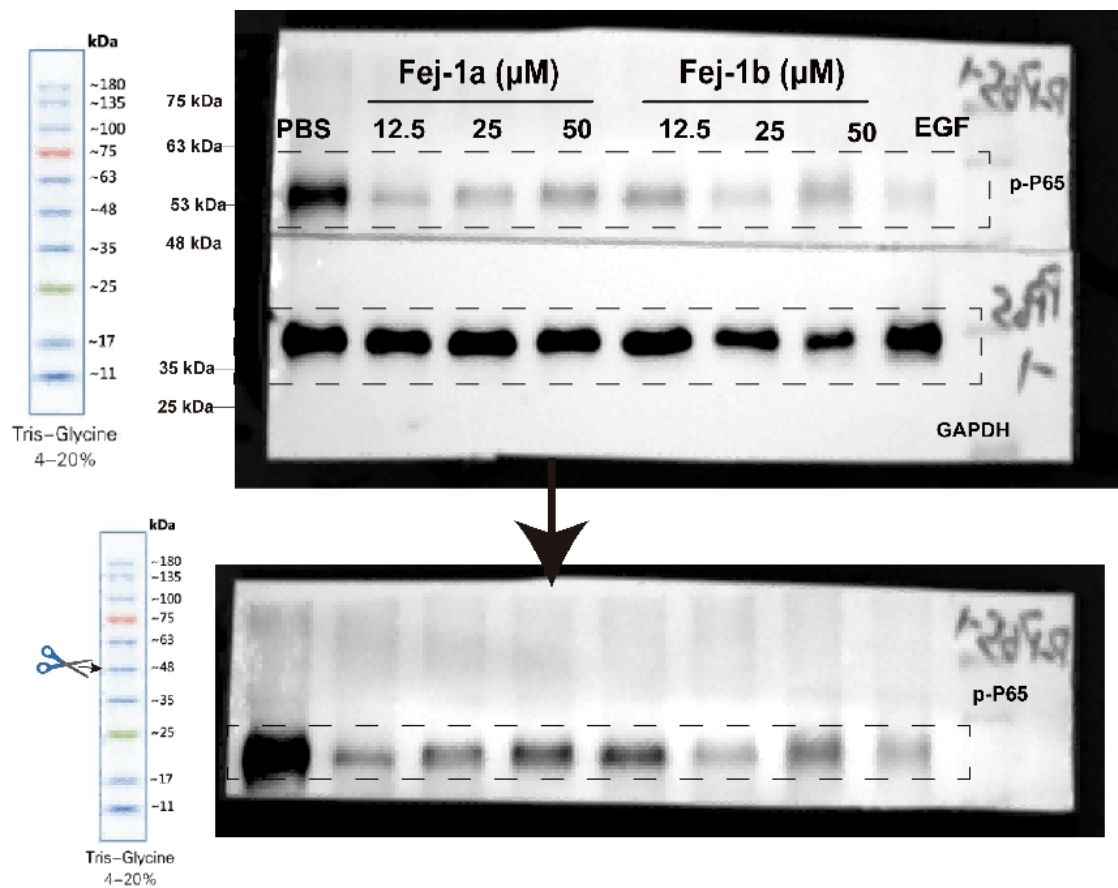
(4) Phospho-I κ B α (1:1000, ABclonal, AP0707)

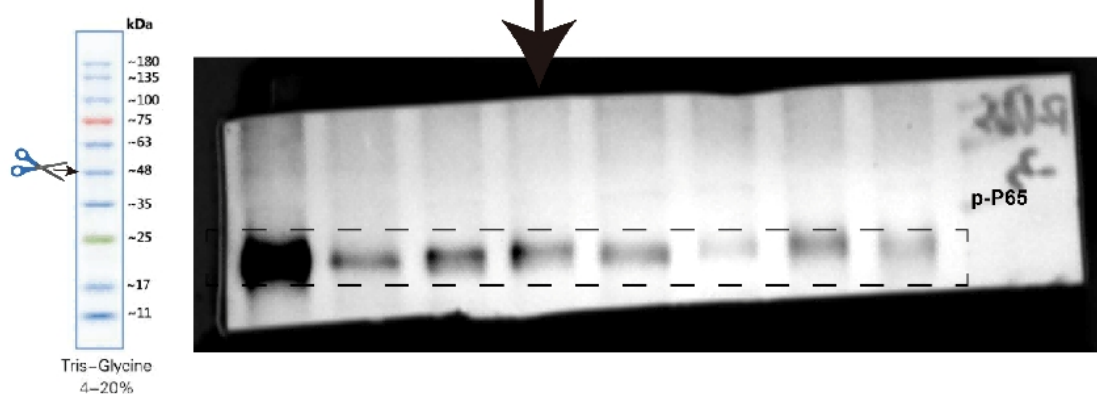
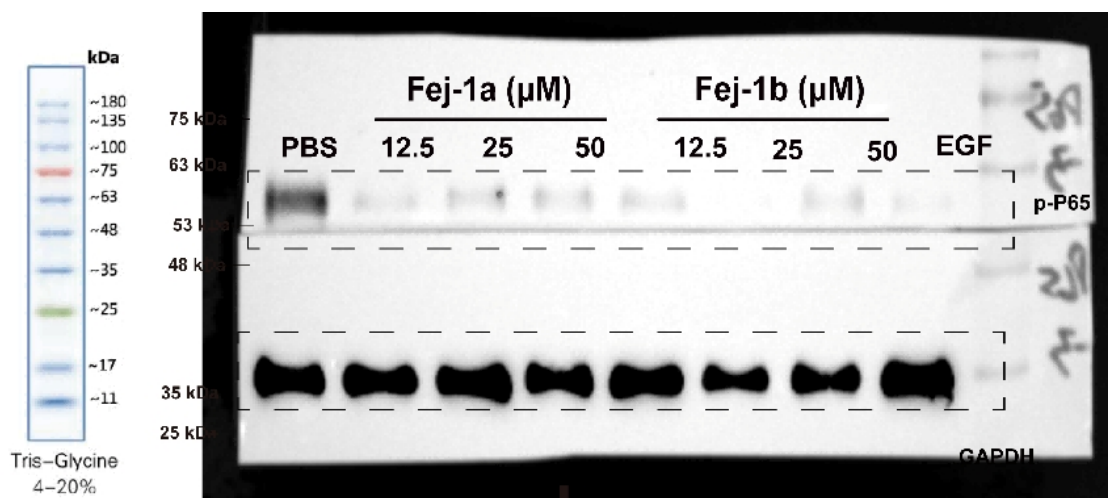
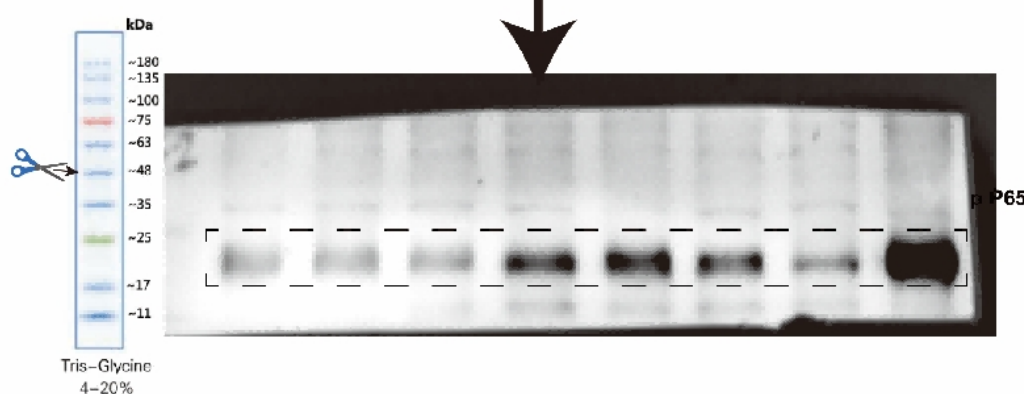
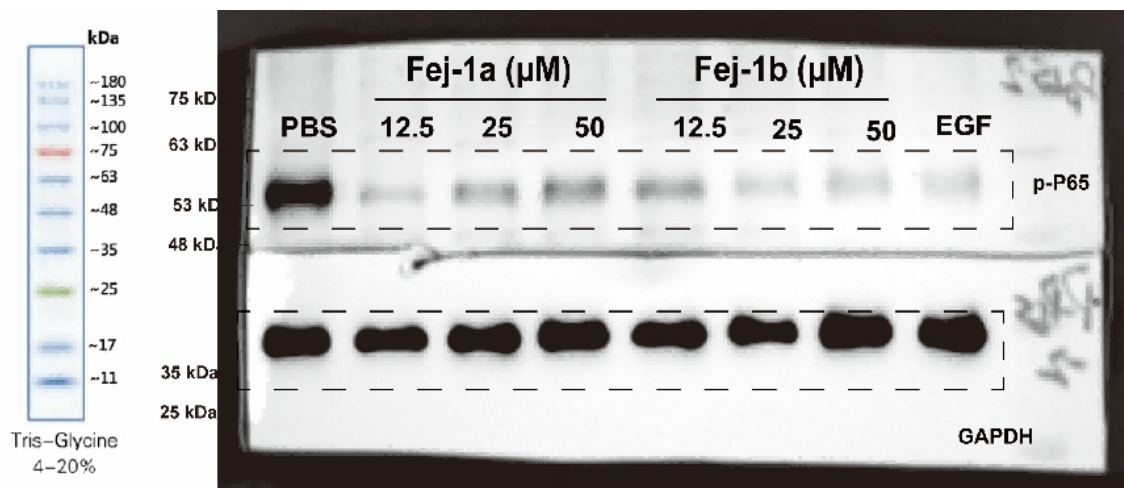




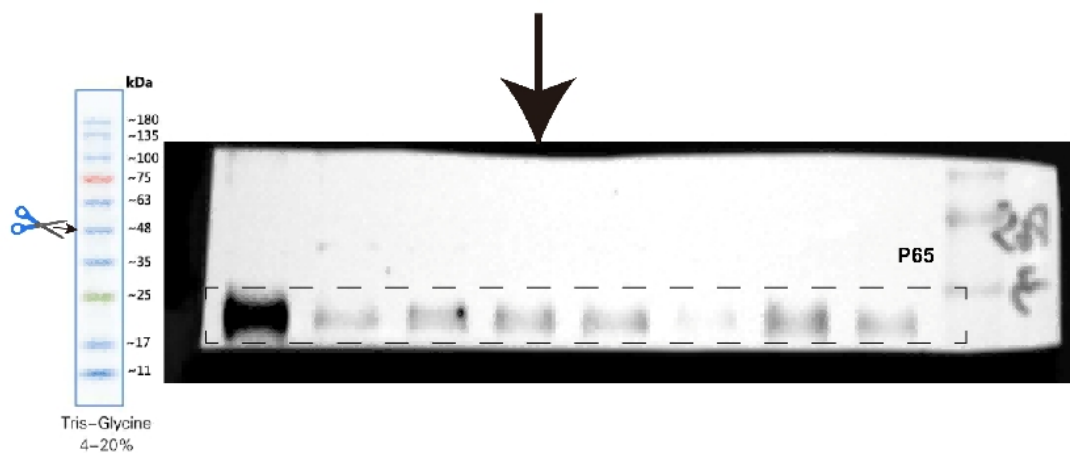
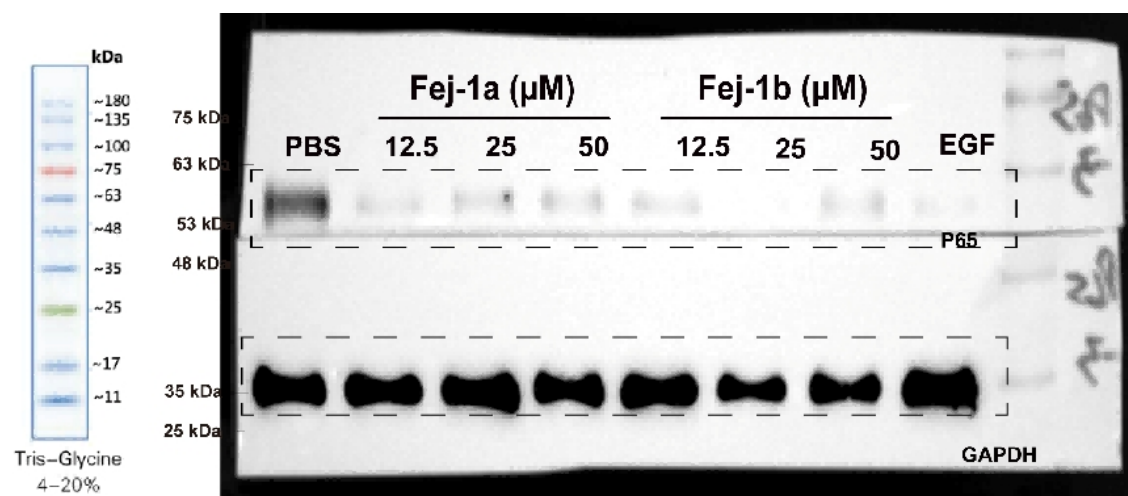
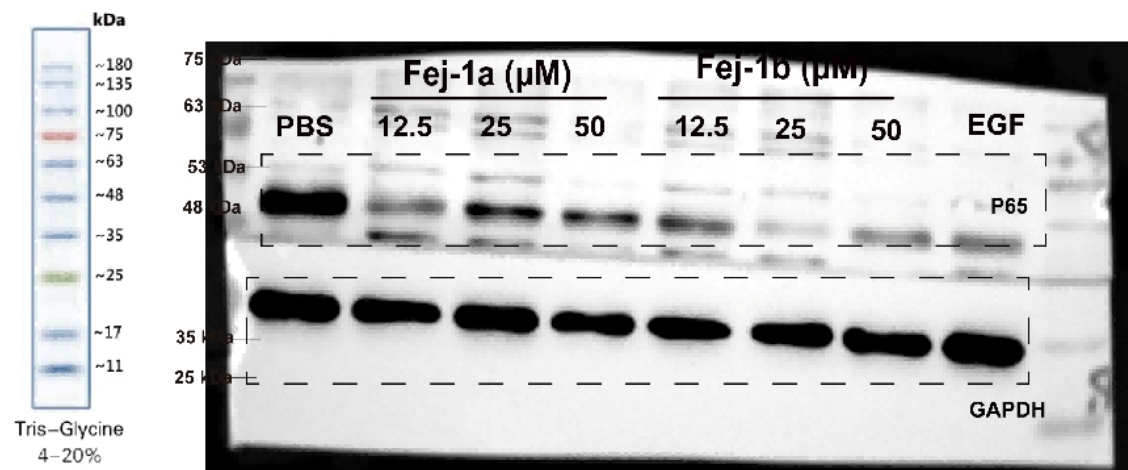


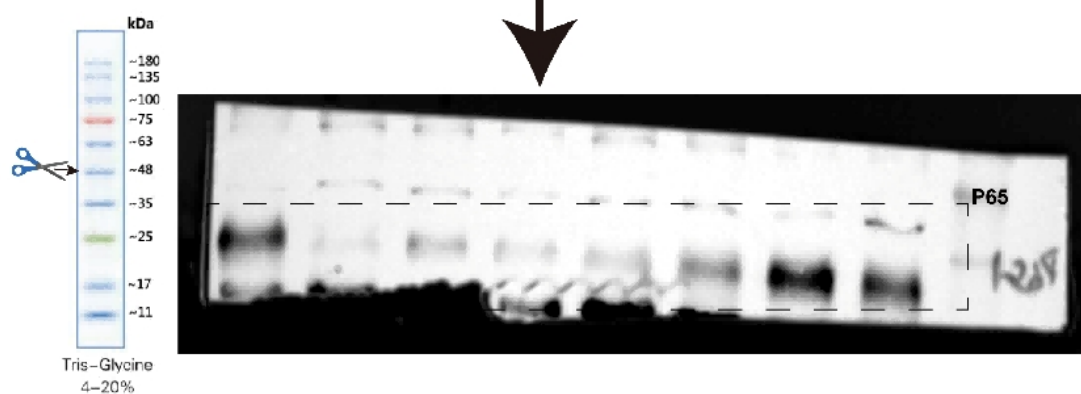
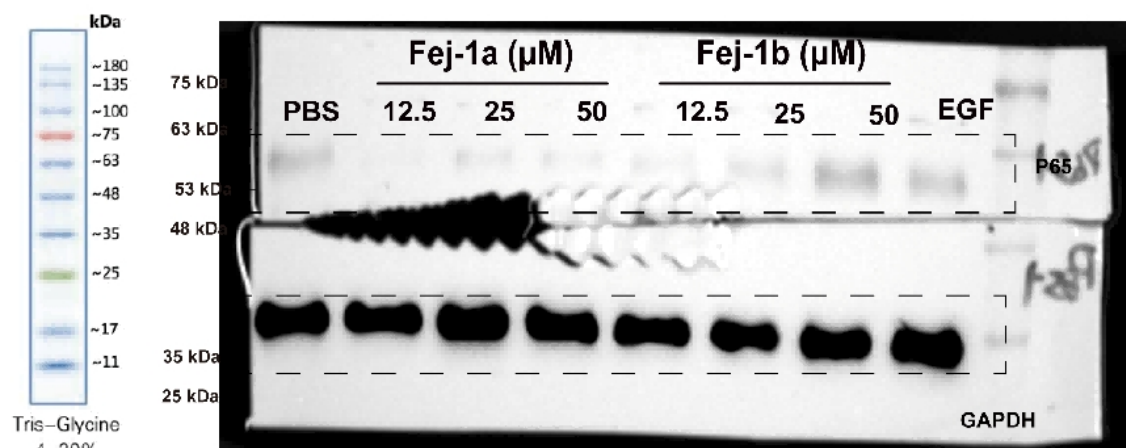
(5) Phospho-p65 (1:1000, Beyotime, AN371)





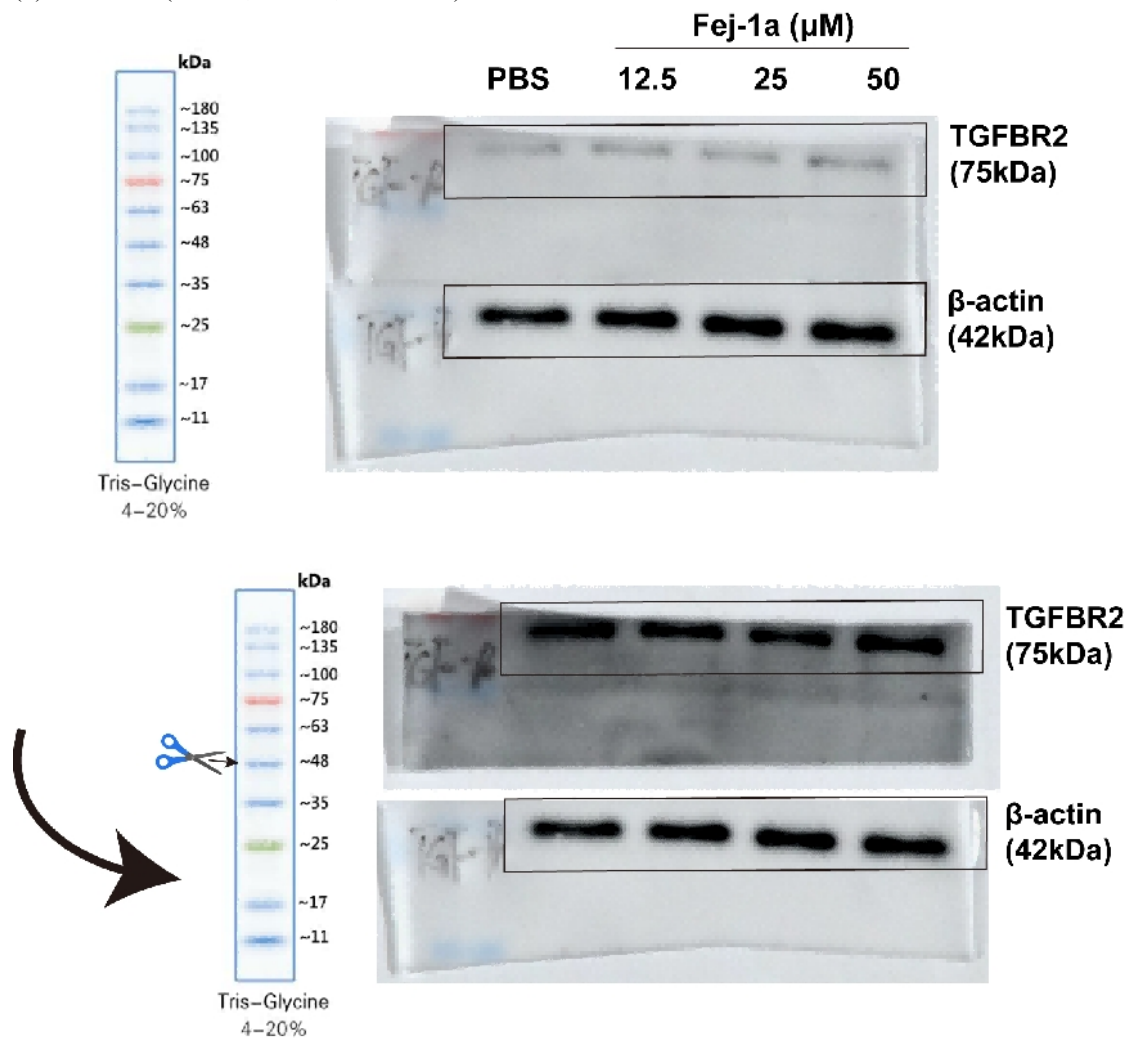
(6) P65 (1:1000, CST, 6956T)

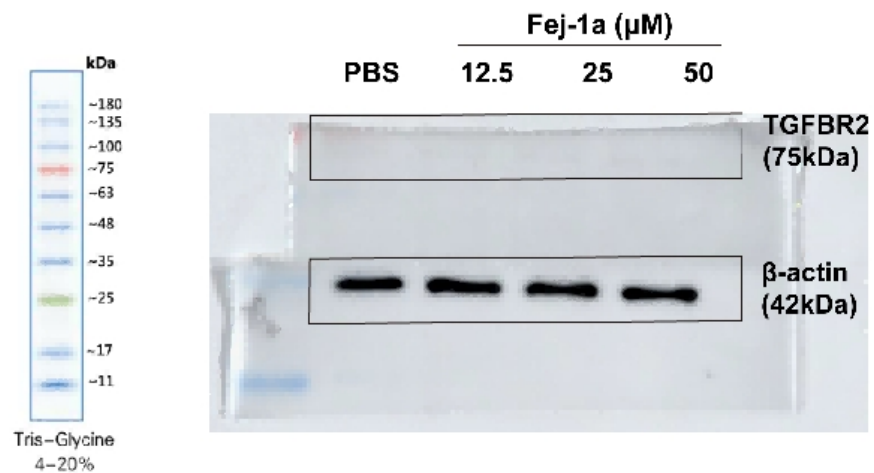
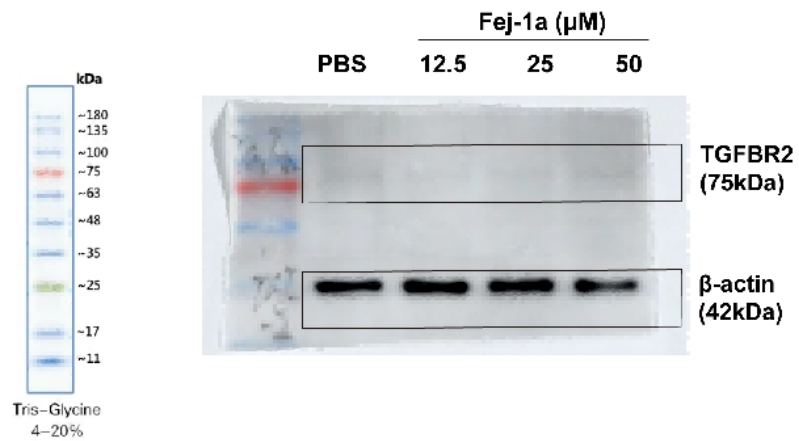


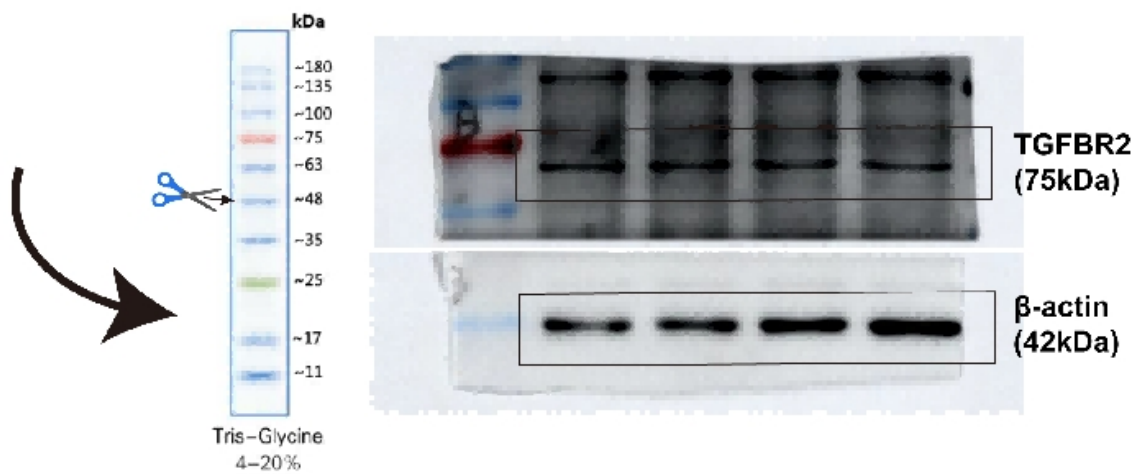
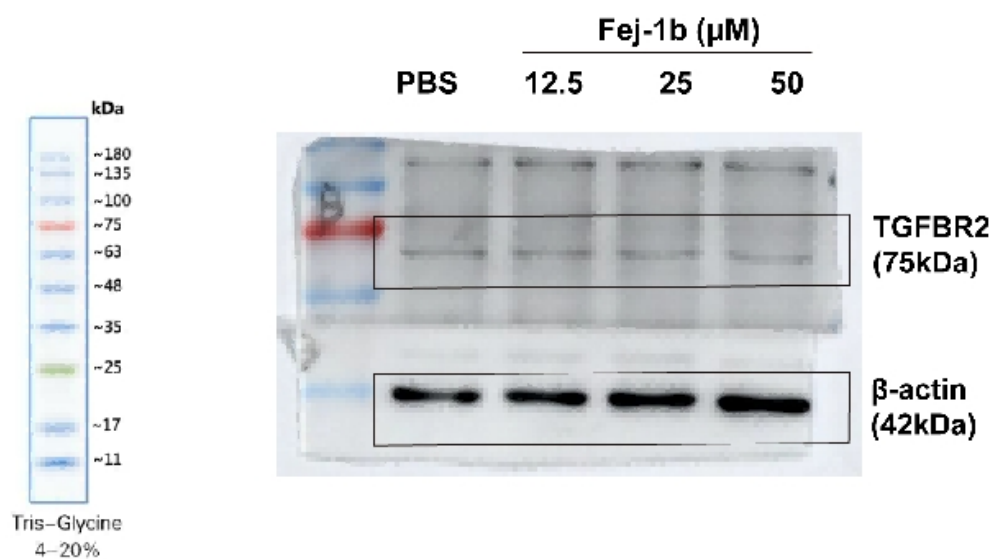


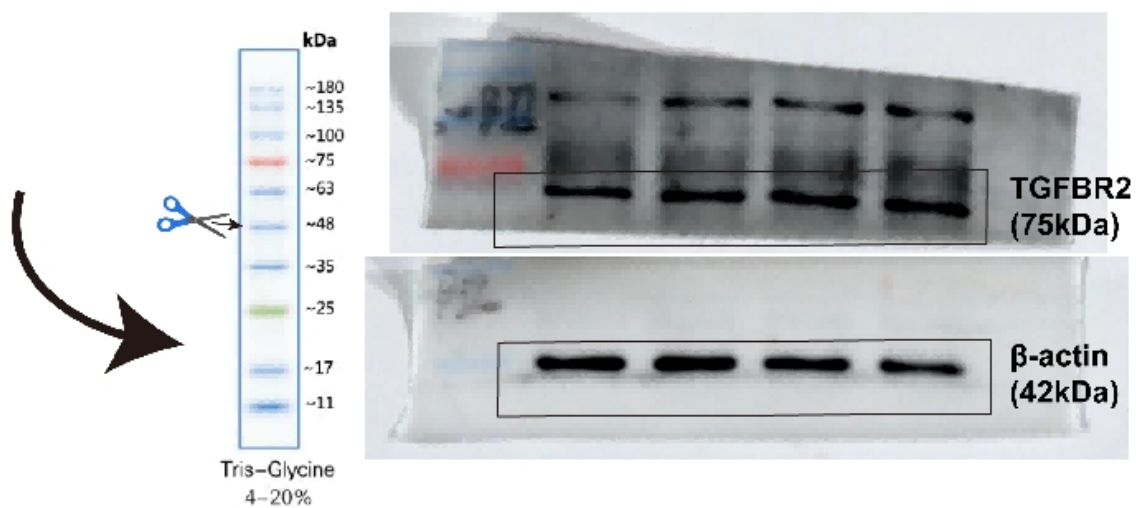
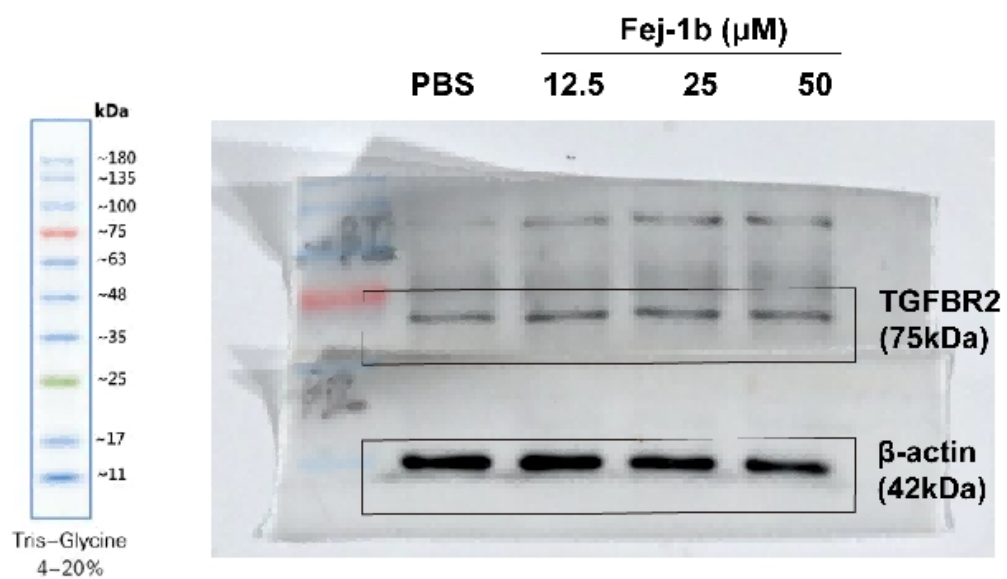
4. **Fig.9. (A and B)** Western blot analysis and quantitative assessment of key TGF- β signaling components: TGFBR2, Smad4, Smad2/3, and p-Smad2/3 in HSFs following treatment with Fej-1a and Fej-1b. β -actin (1:1000, Beyotime, AF5003), GAPDH (1:2000, Beyotime, AF1186), and α -Tubulin (1:2000, Affinity, AF7010)

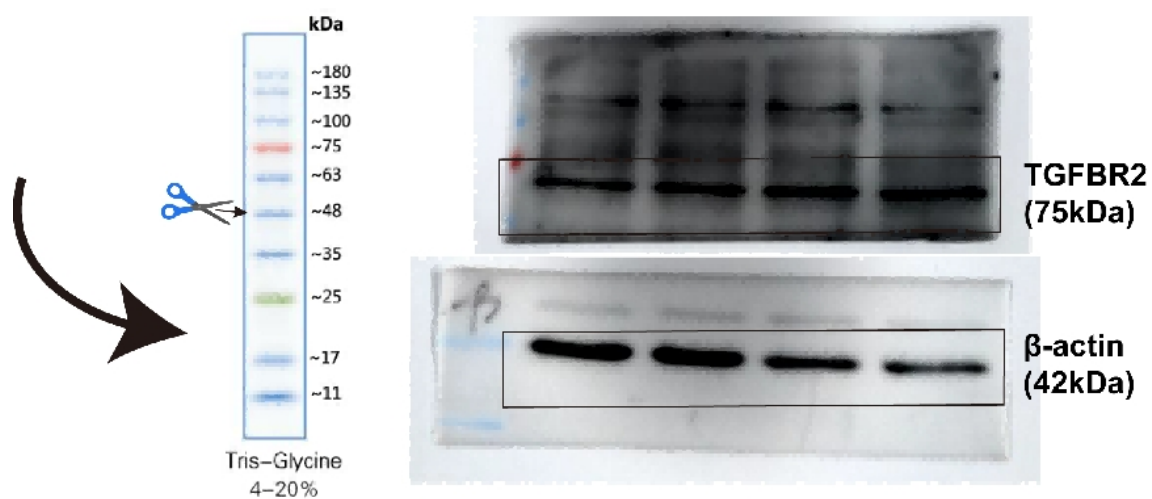
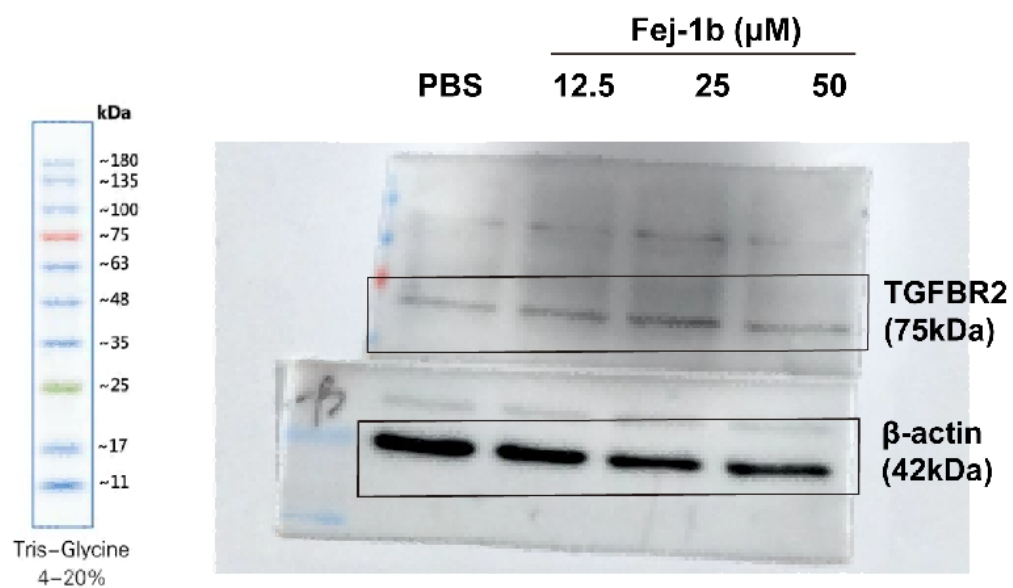
(1) TGFBR2 (1:1000, Abcam, ab184948)



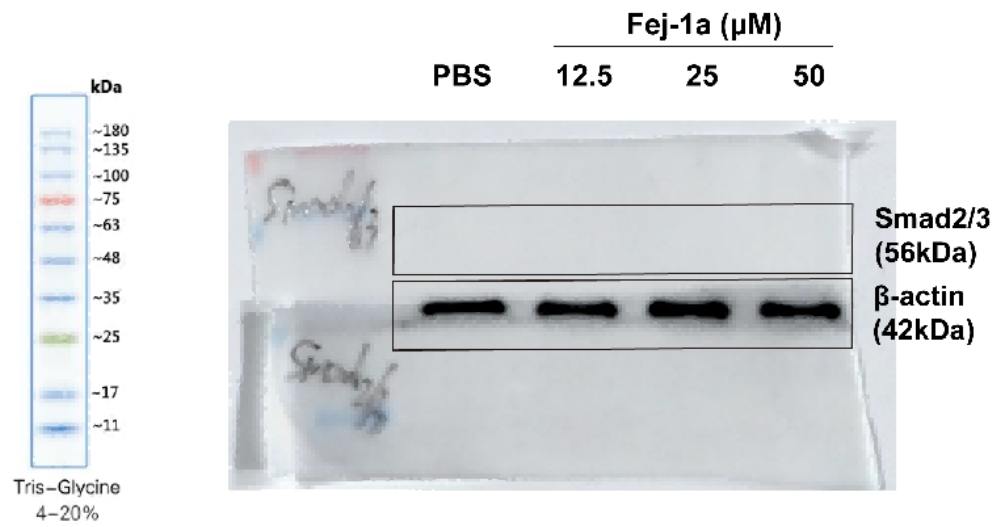


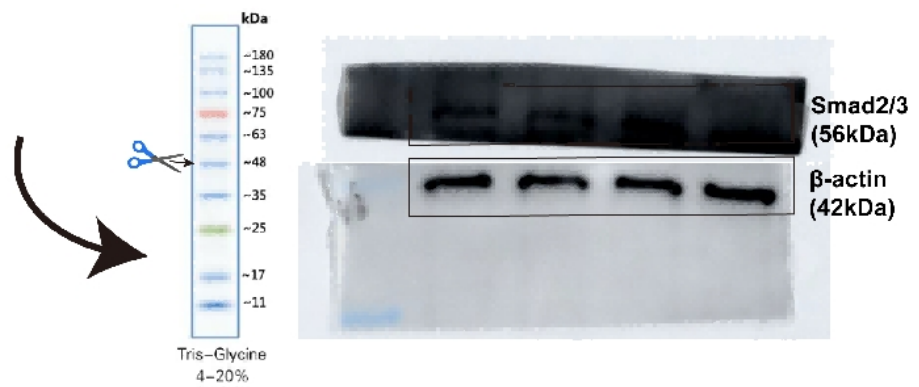
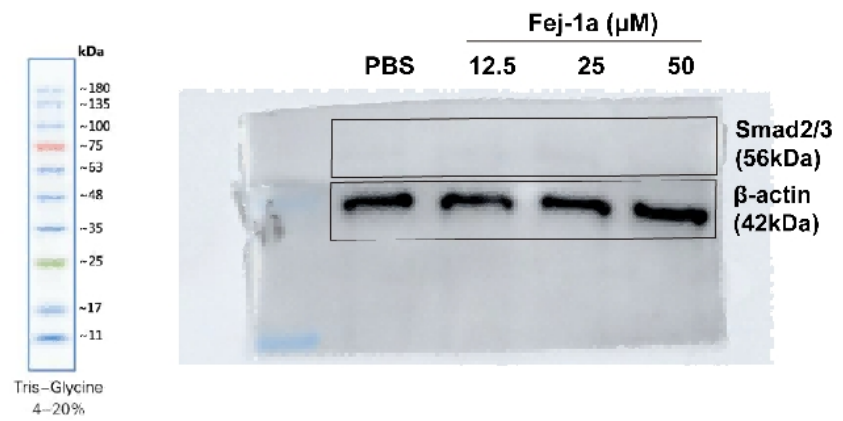


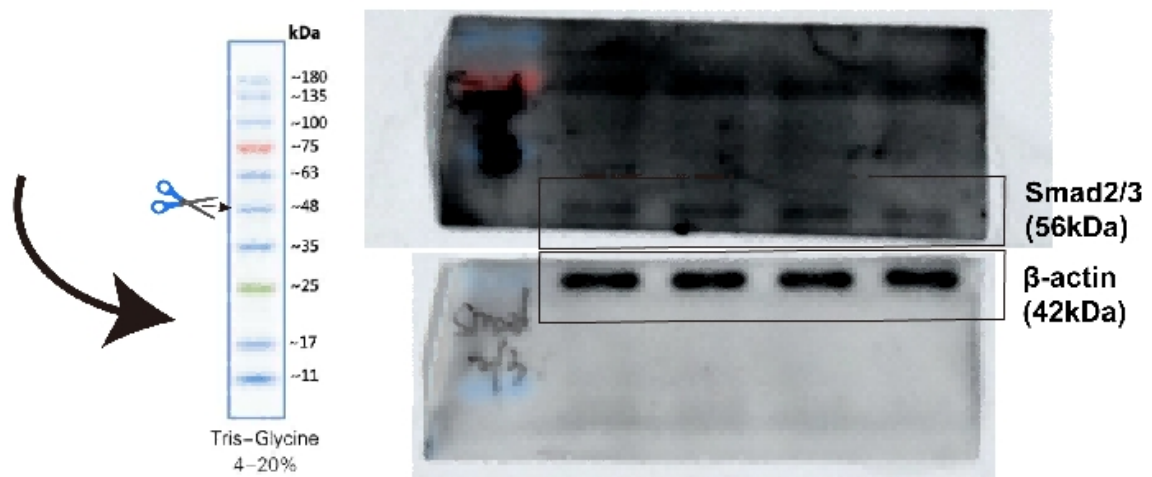
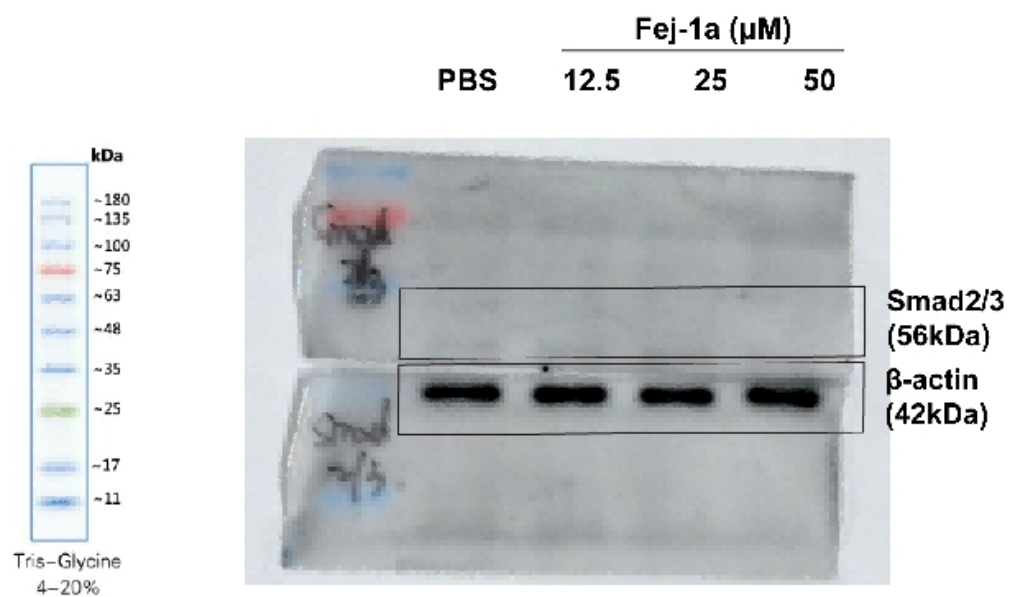


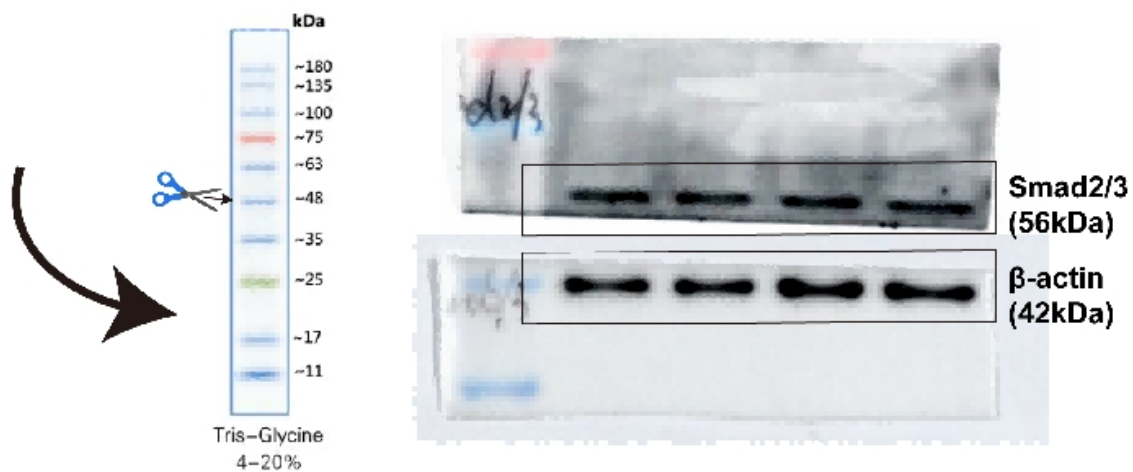
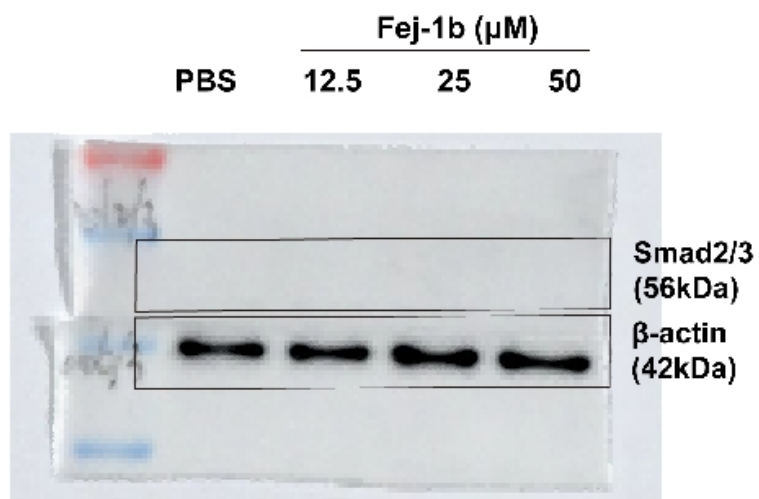
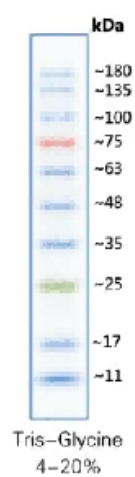


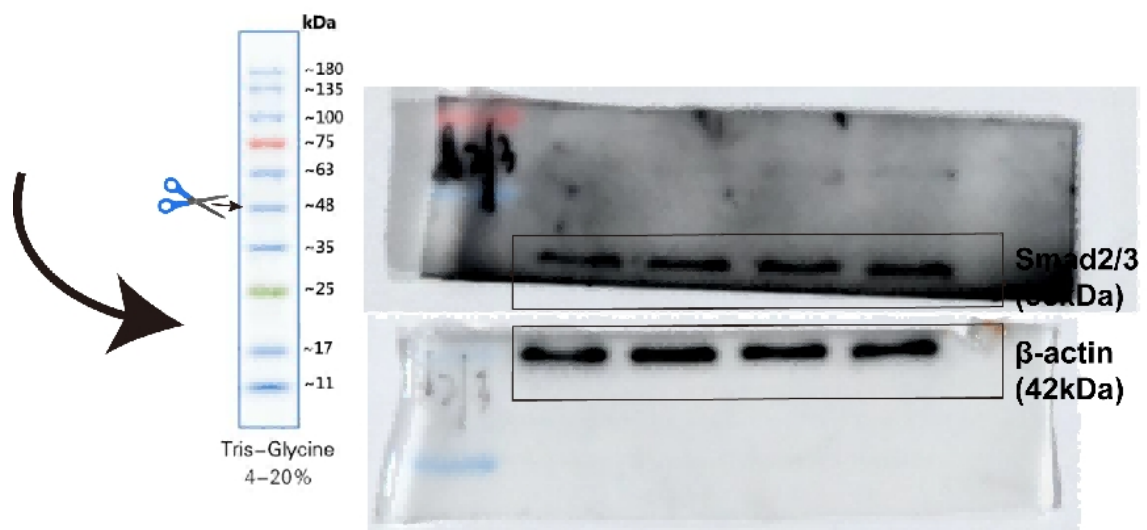
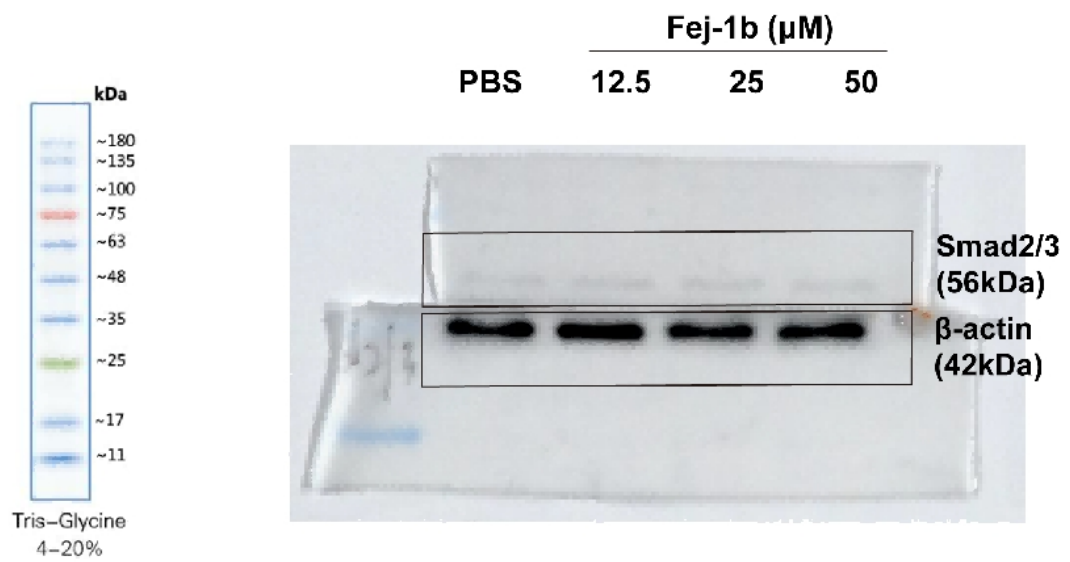
(2) Smad2/3 (1:1000, Abcam, ab202445)

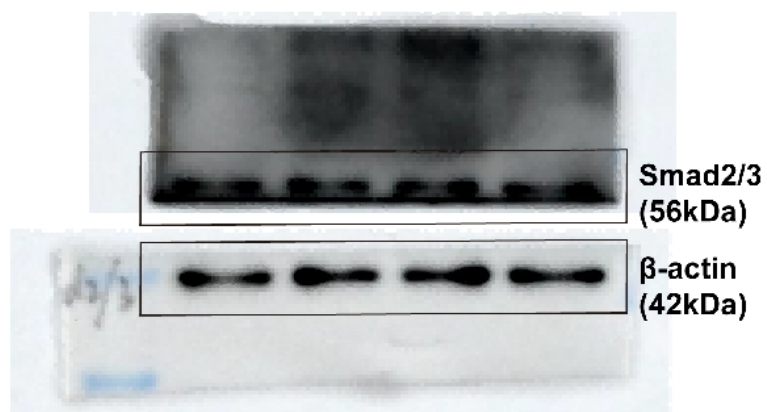
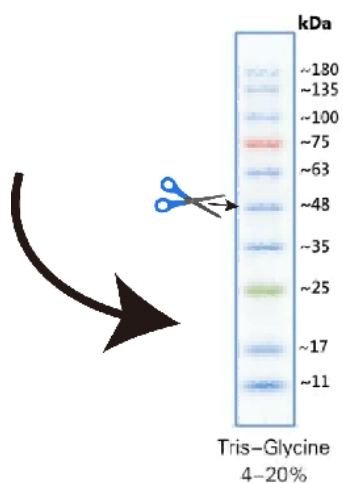
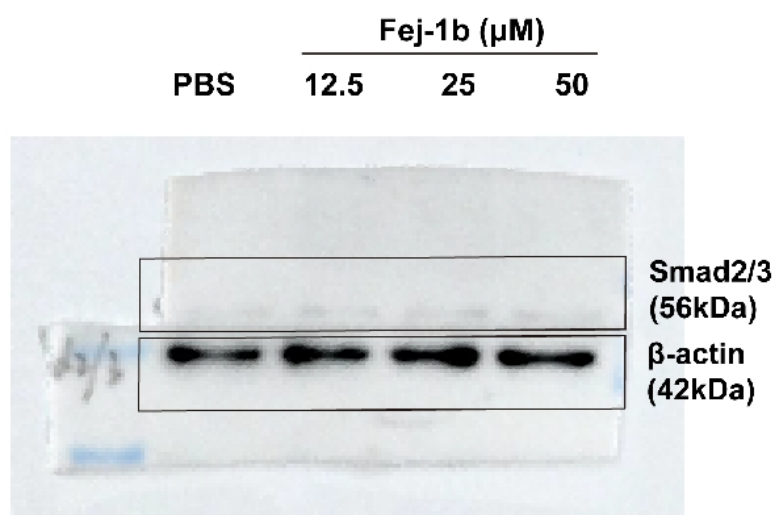
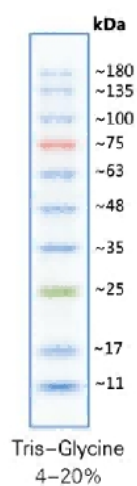




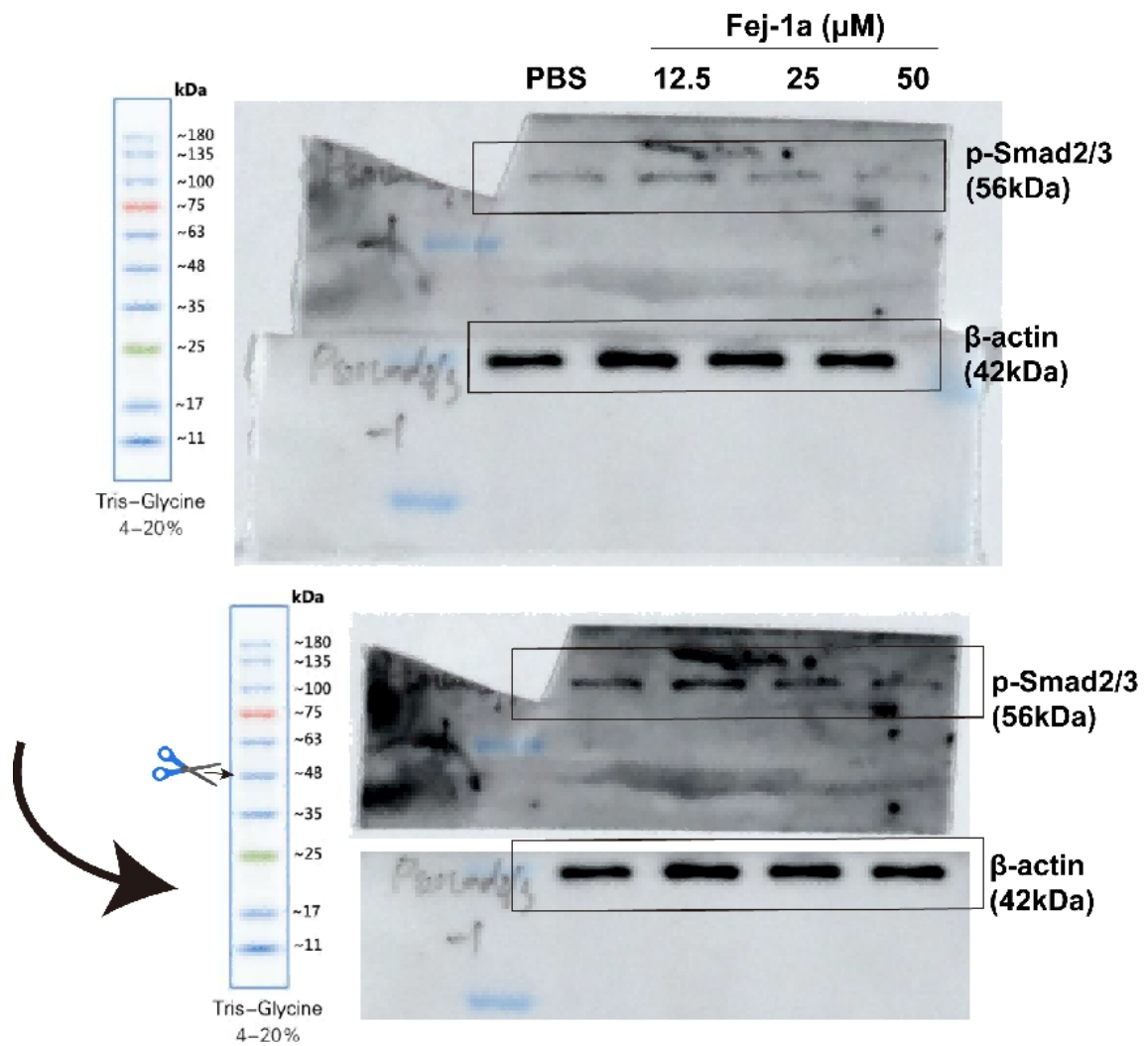


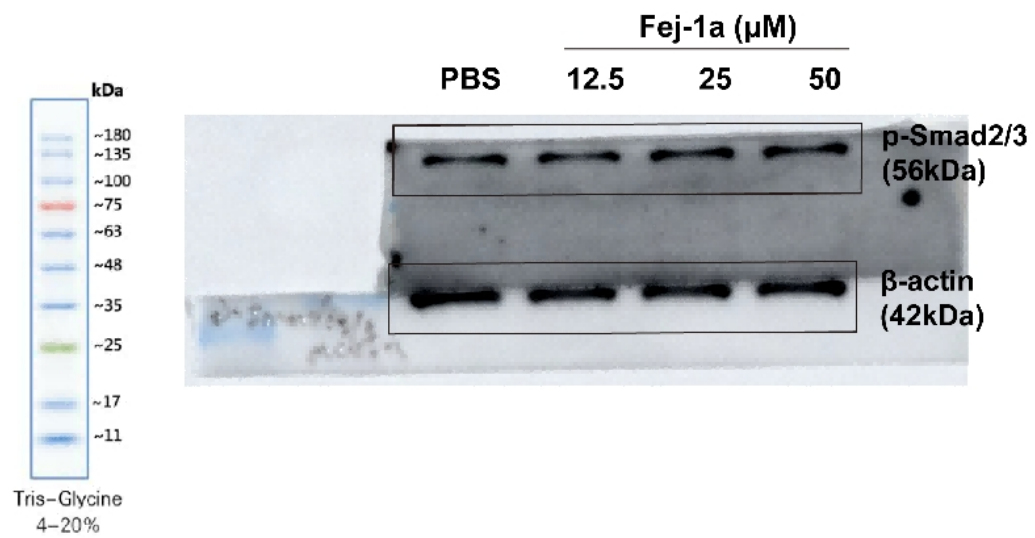


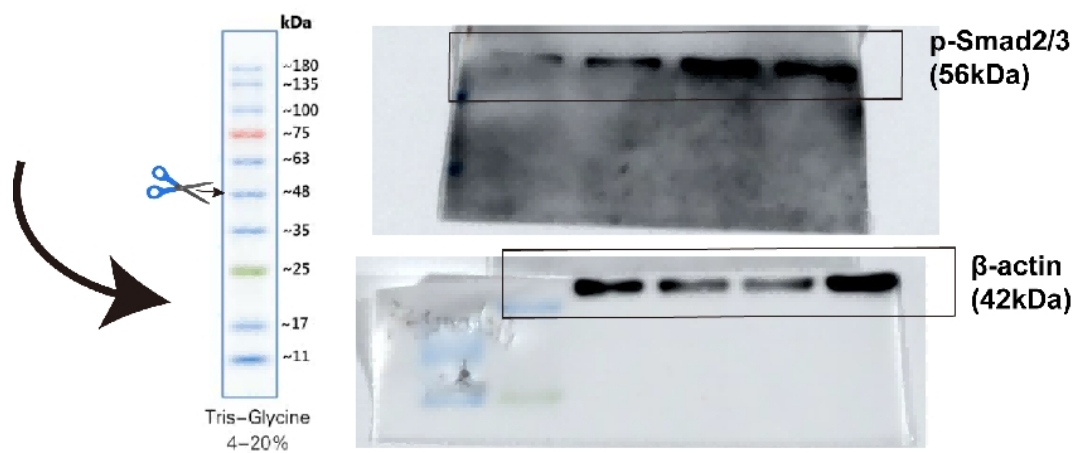
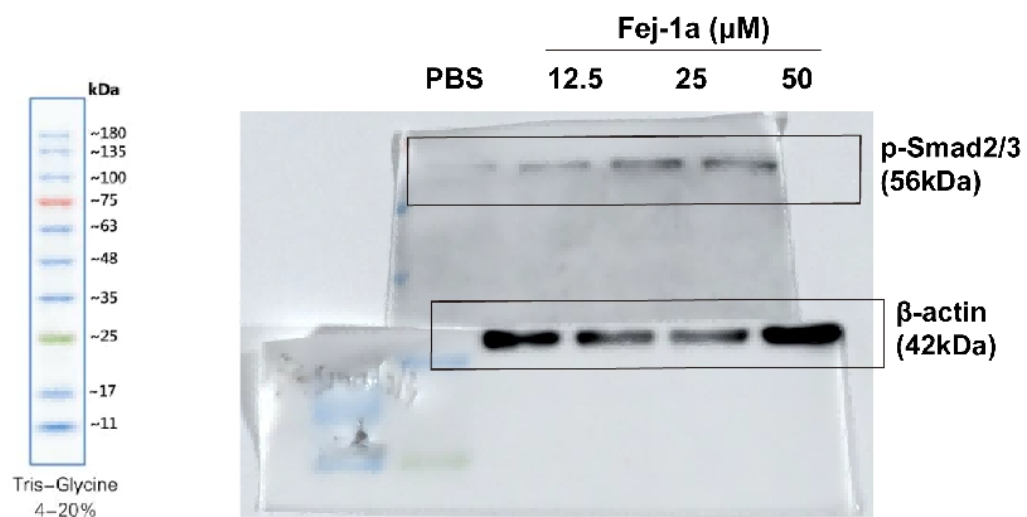


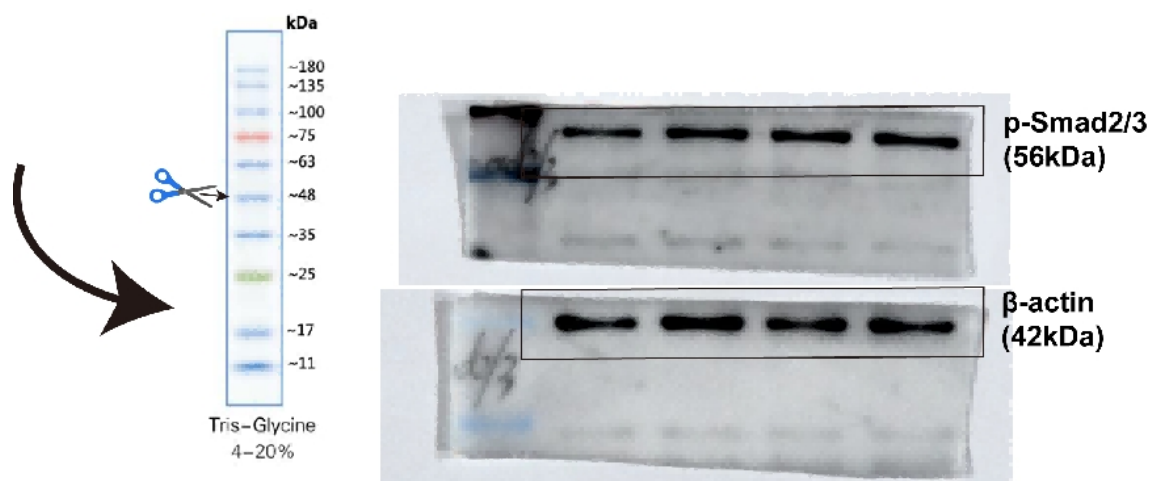
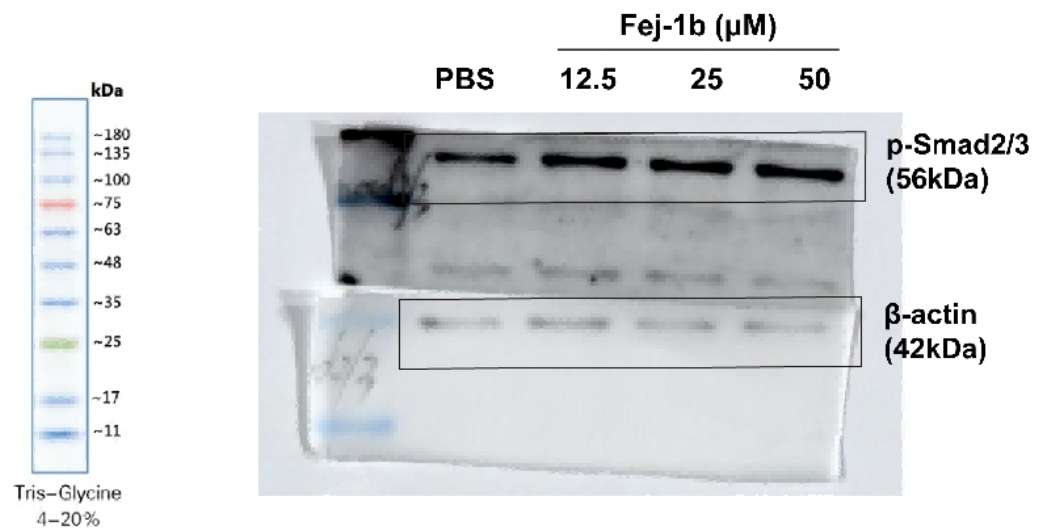


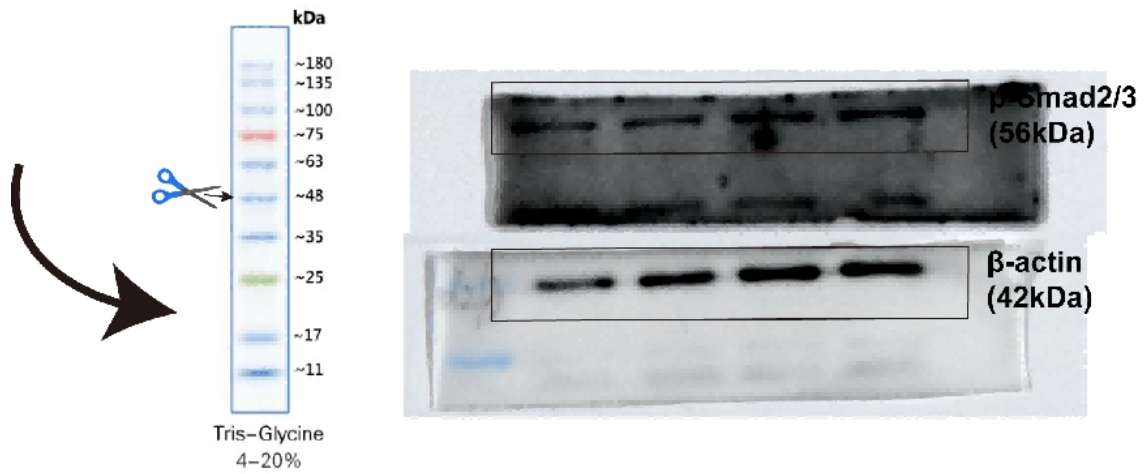
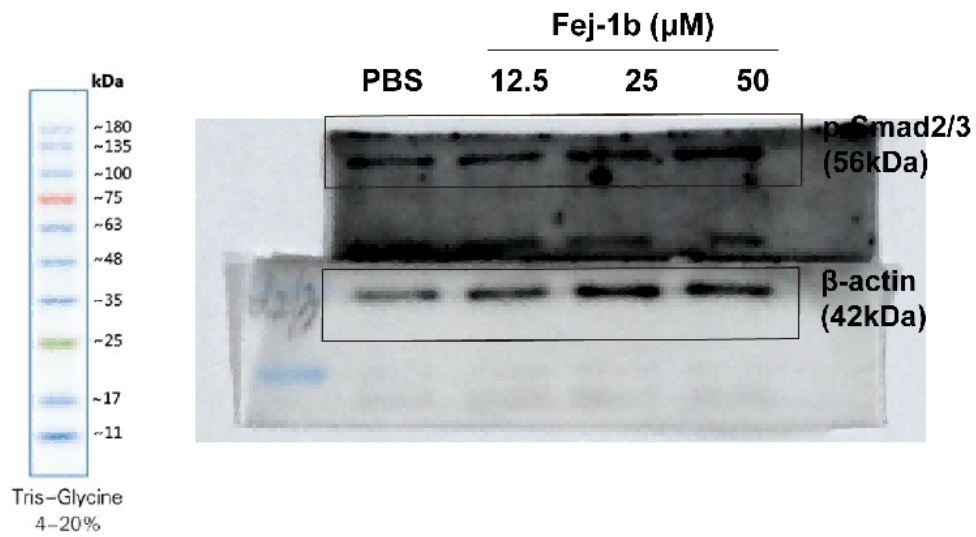
(3) Phospho-Smad2/3 (1:1000, Abcam, ab63399)

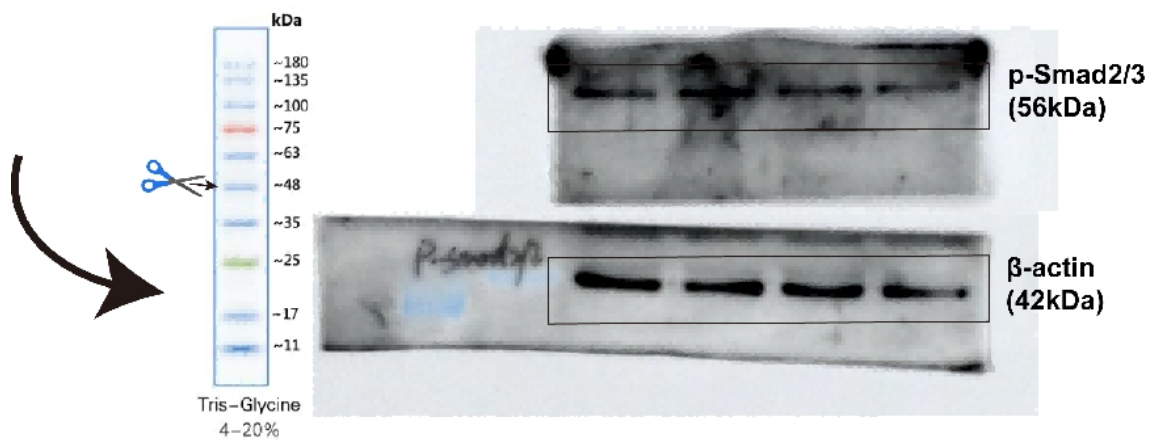
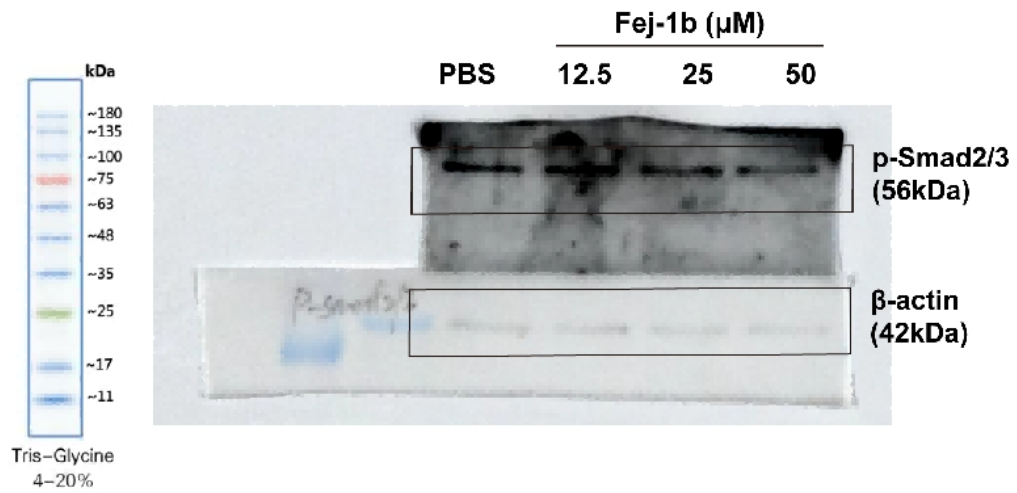




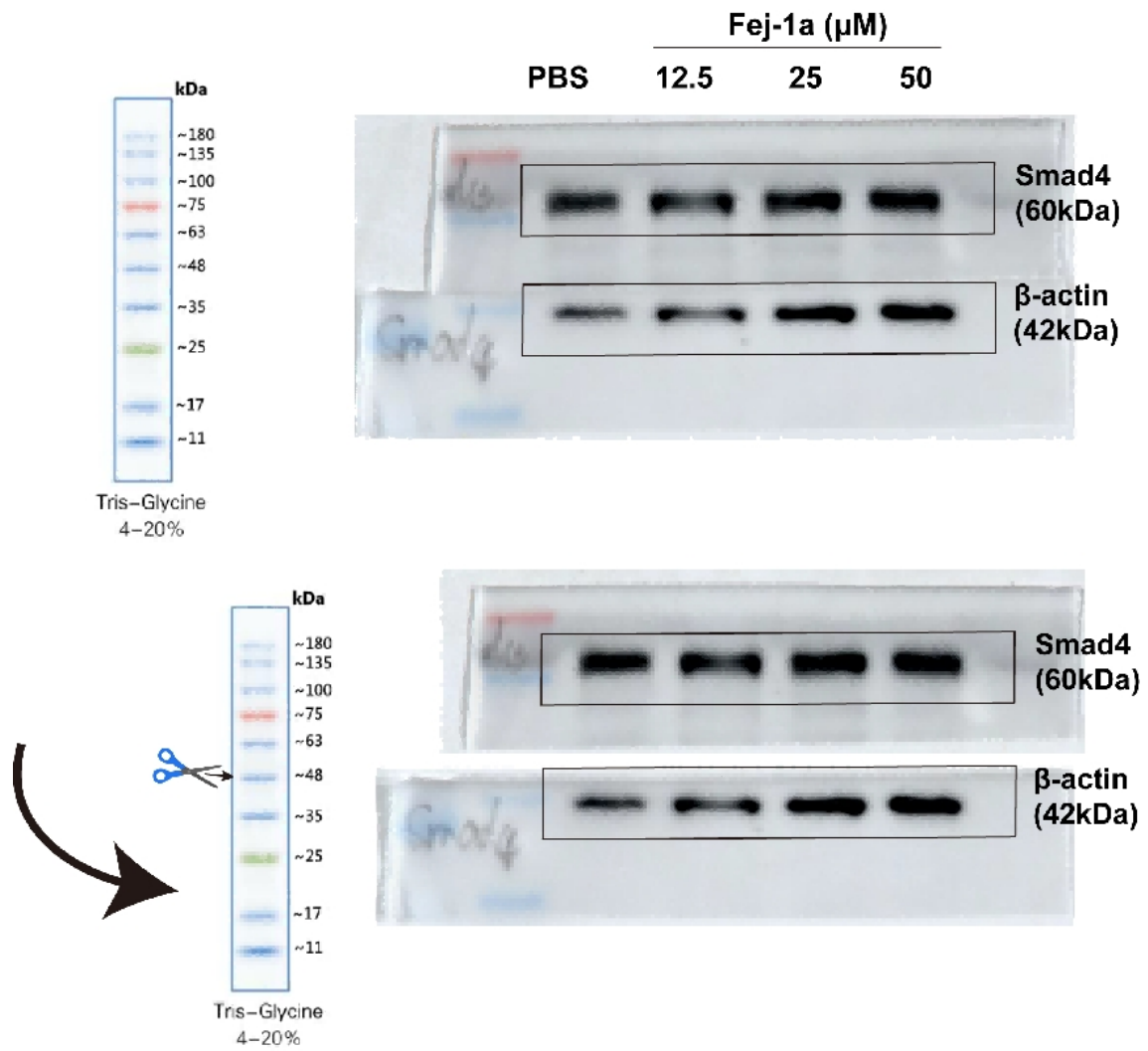


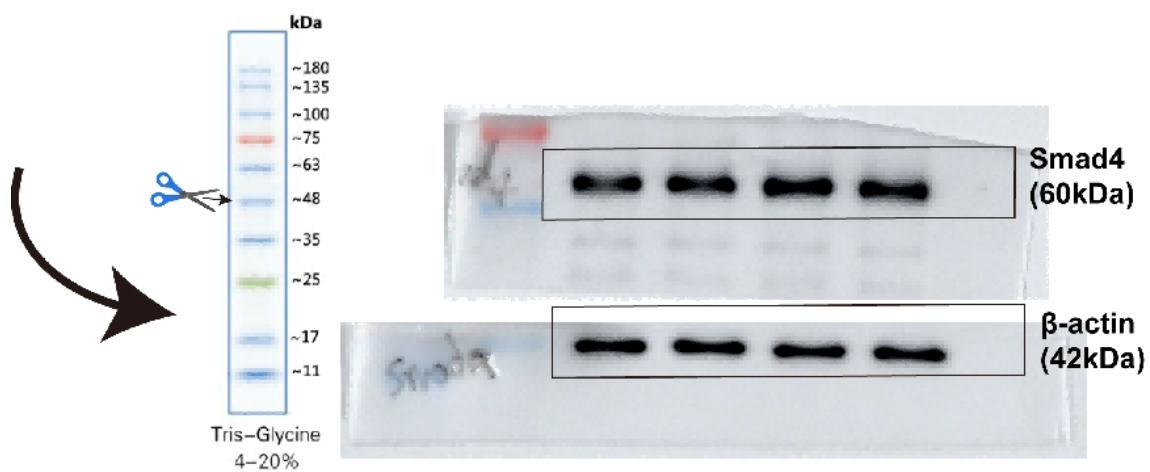
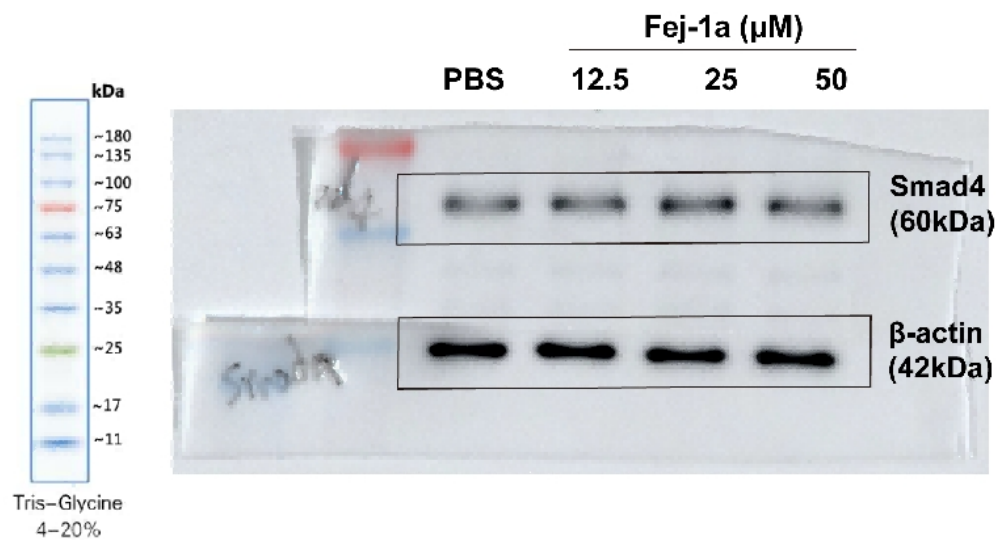


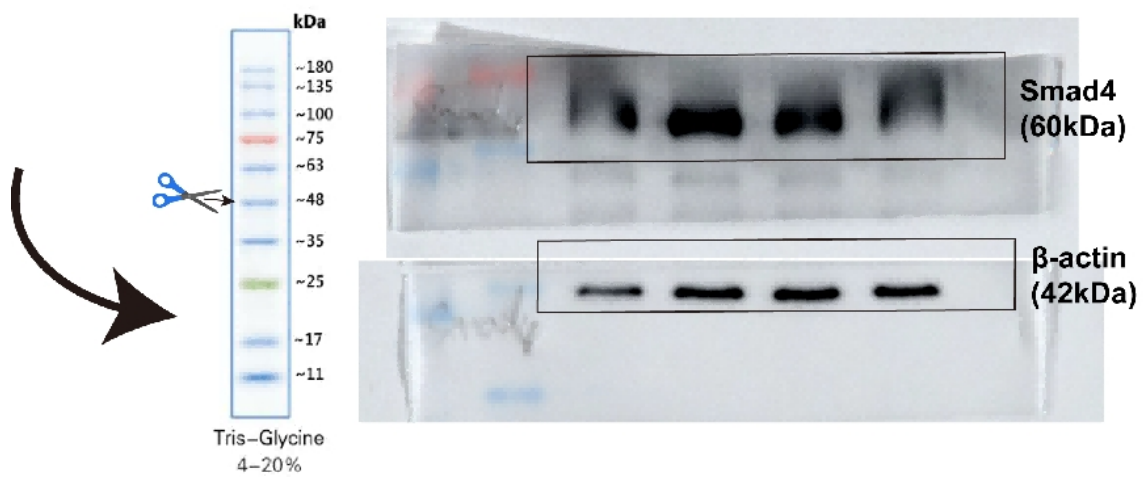
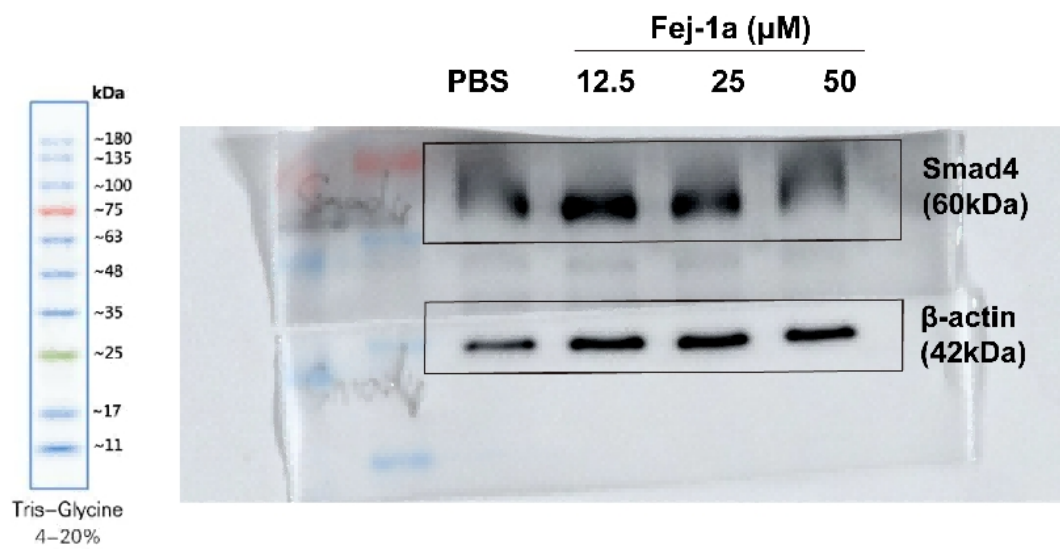


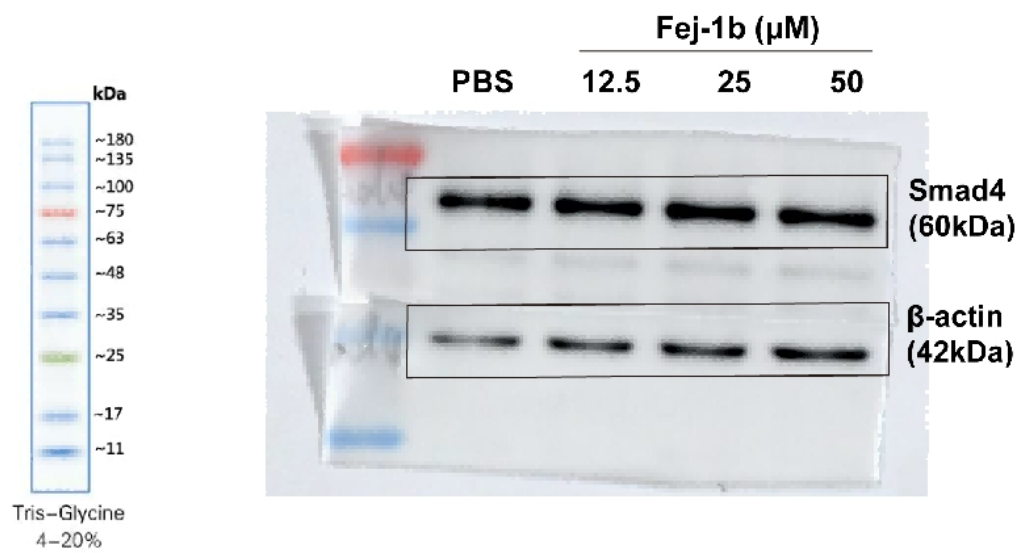


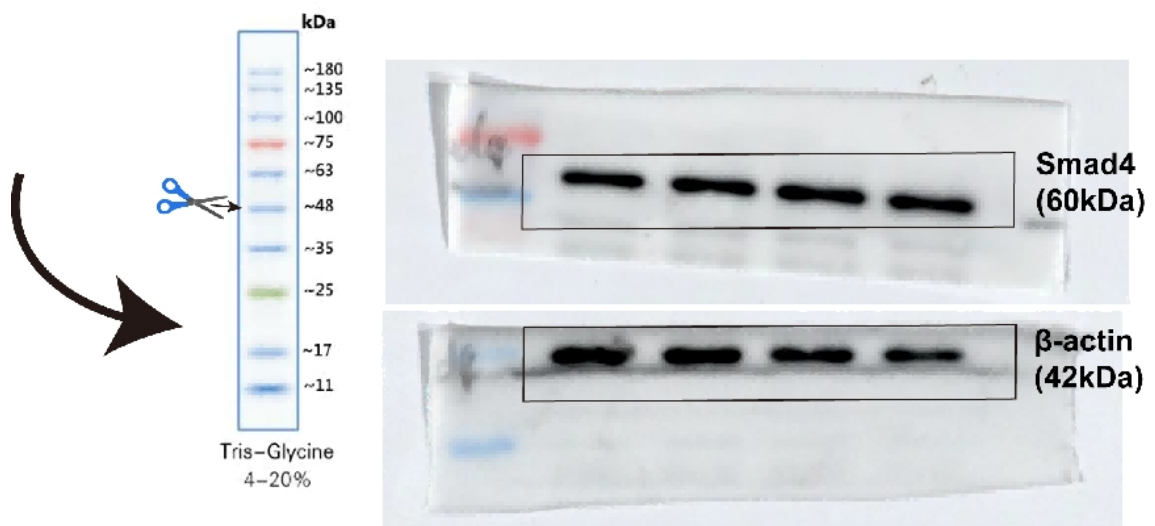
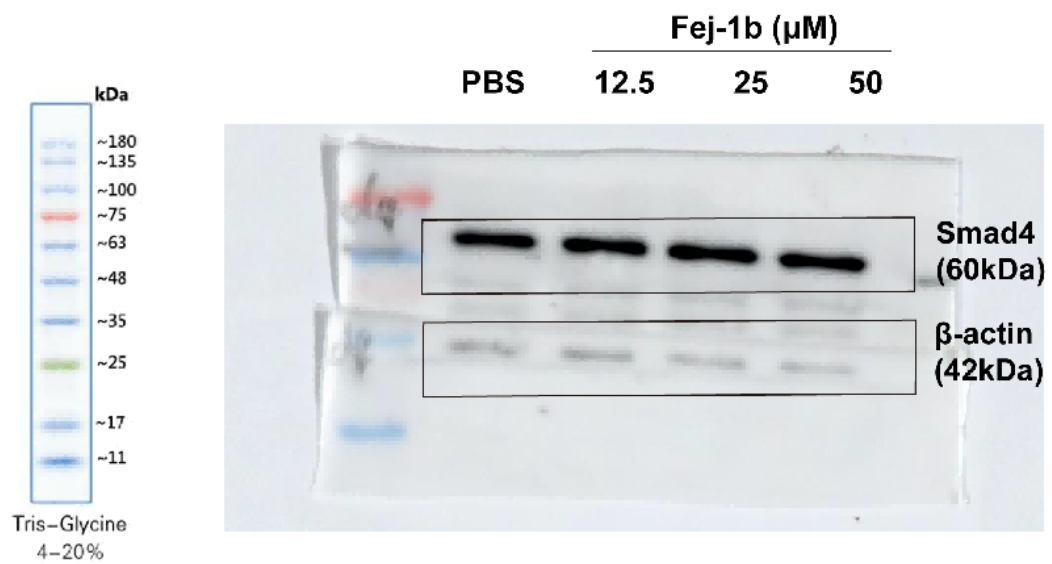
(4) Smad4 (1:1000, CST, 38454)

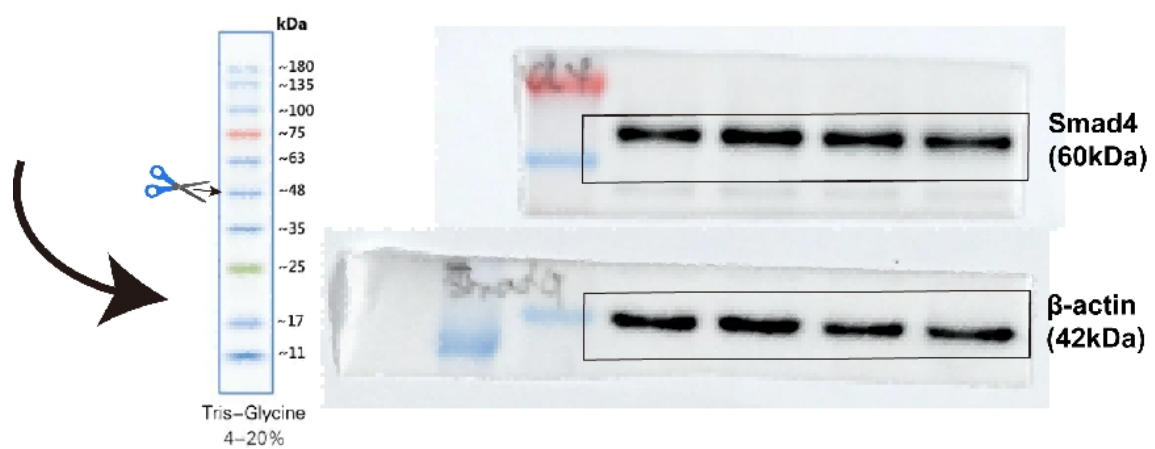
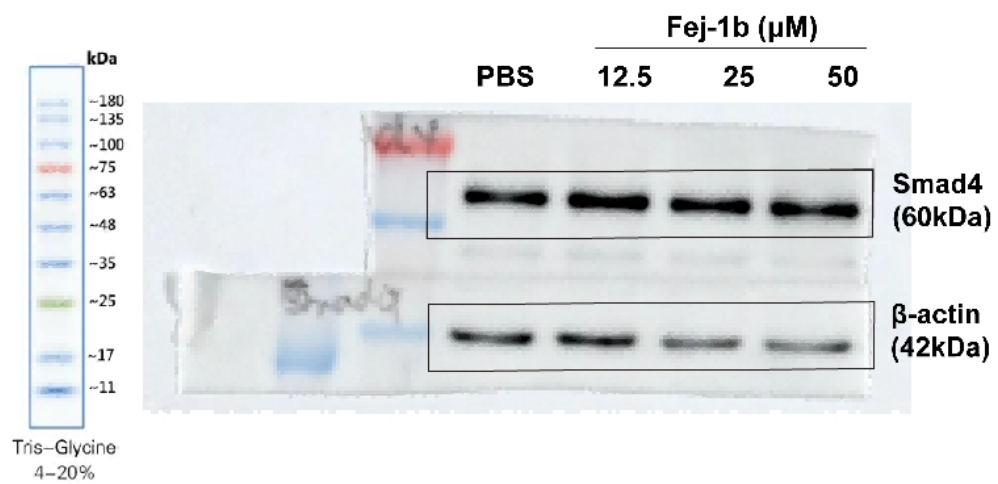




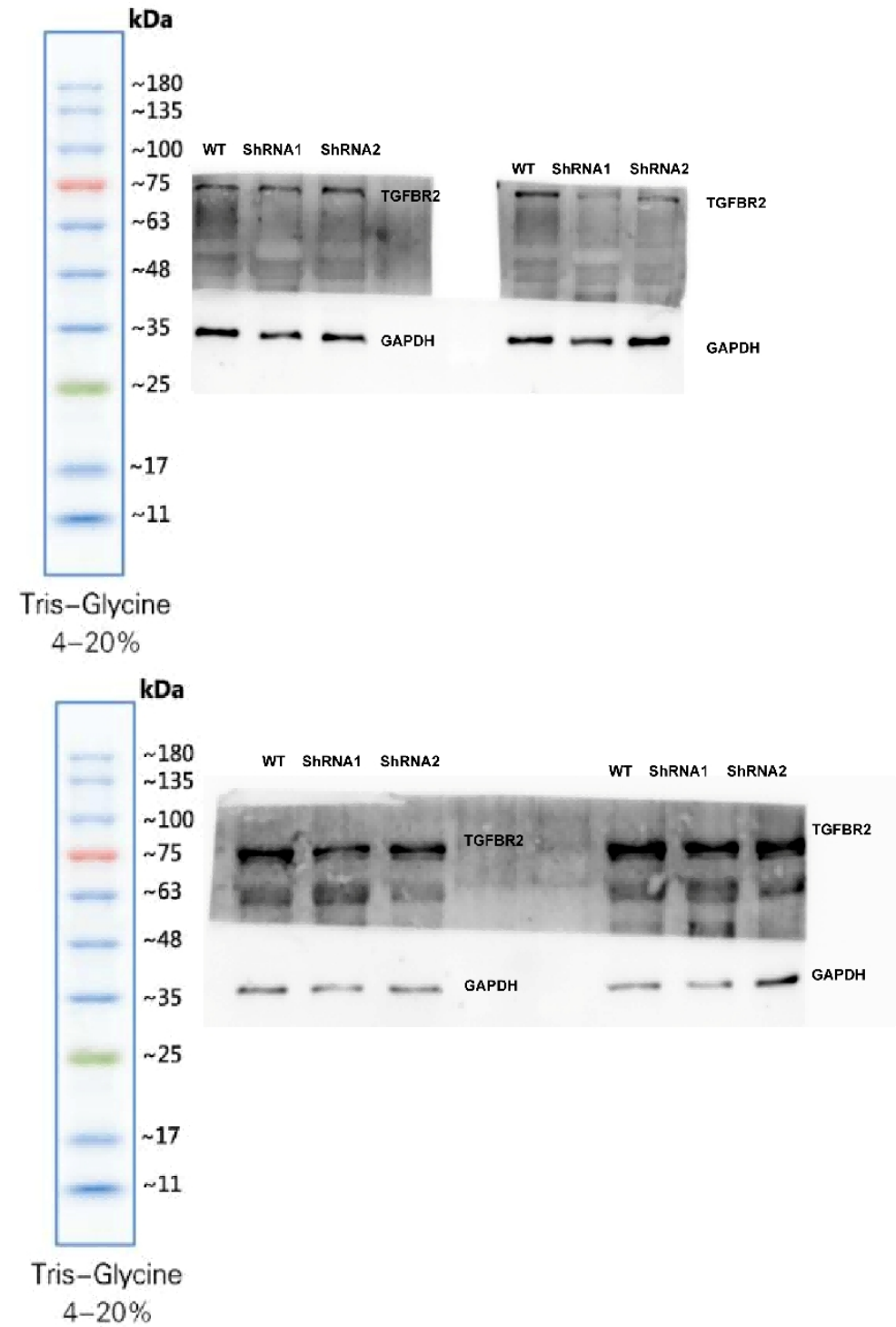




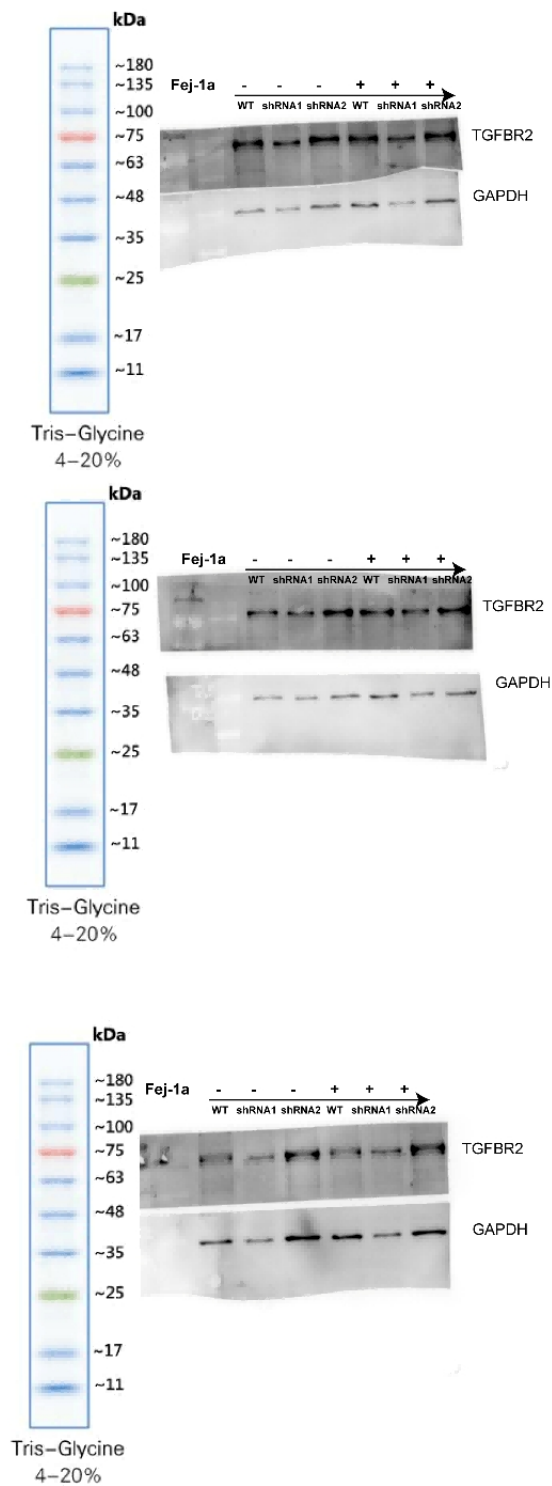


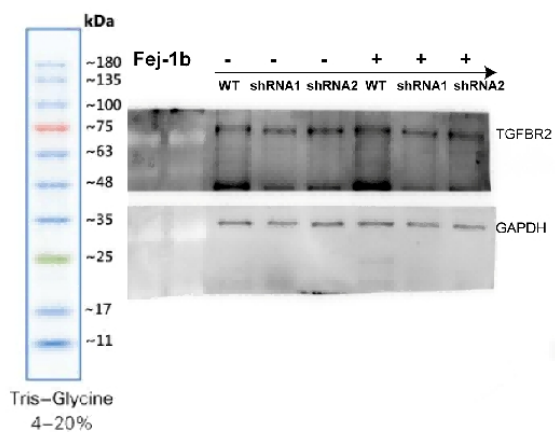
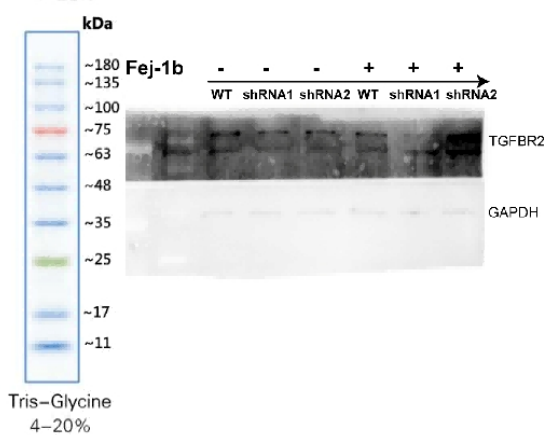
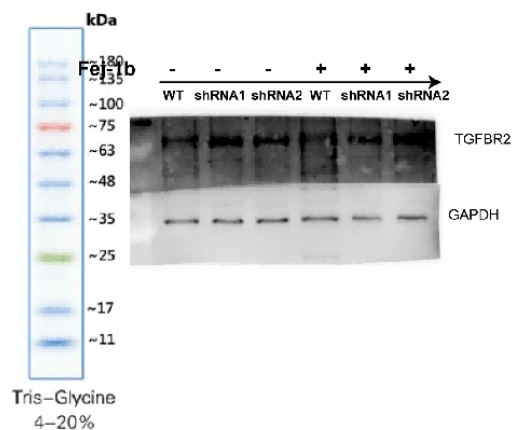


5. **Fig.9. (G and H)** Western blot analysis of TGFBR2 protein expression in HSFs transfected with TGFBR2-targeting shRNAs (shRNA1 and 2).TGFBR2 (1:1000, Abcam, ab184948), β -actin (1:1000, Beyotime, AF5003), GAPDH (1:2000, Beyotime, AF1186), and α -Tubulin (1:2000, Affinity, AF7010)

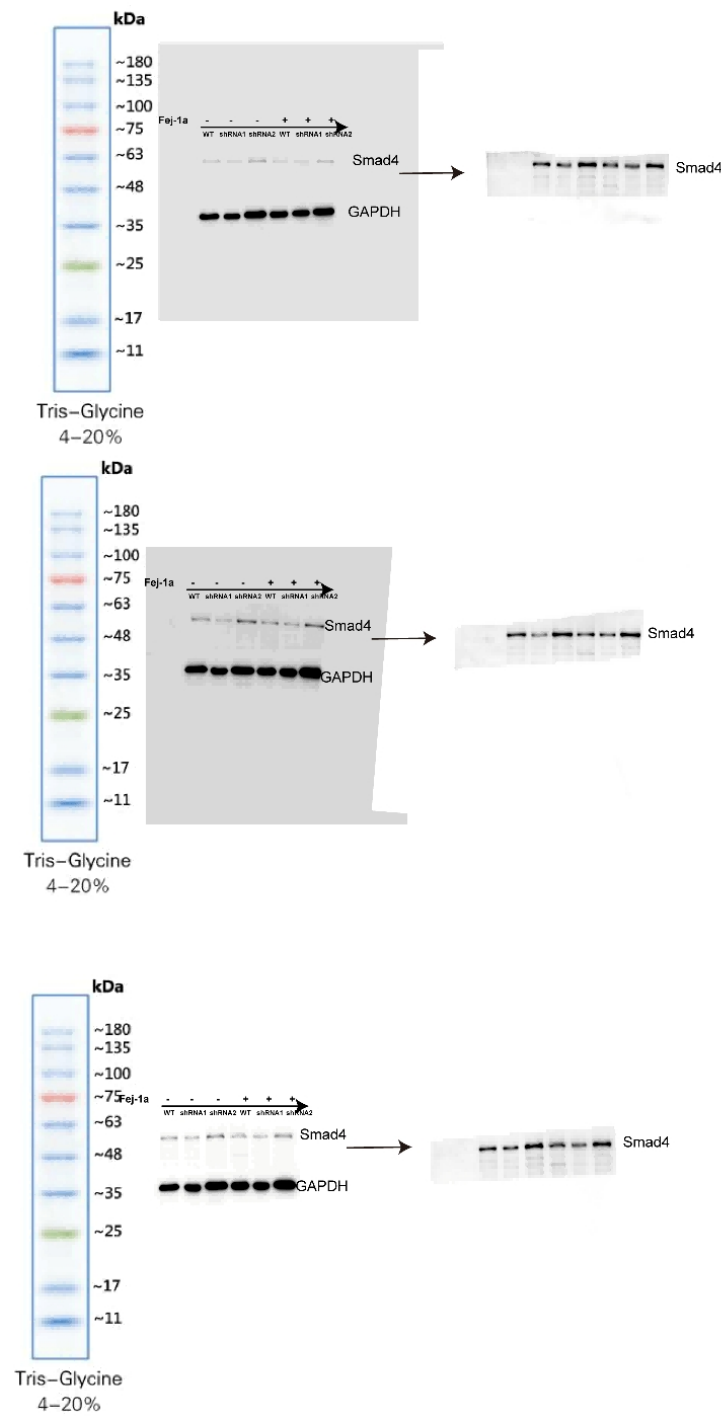


6. **Fig.9. (I-K)** Functional rescue experiments in TGFBR2-knockdown HSFs: Western blot analysis of TGFBR2 expression after 24-hour treatment with Fej-1a and Fej-1b at 25 μ M. β -actin (1:1000, Beyotime, AF5003), GAPDH (1:2000, Beyotime, AF1186), and α -Tubulin (1:2000, Affinity, AF7010) (1) TGFBR2 (1:1000, Abcam, ab184948)





(2) Smad4 (1:1000, CST, 38454)



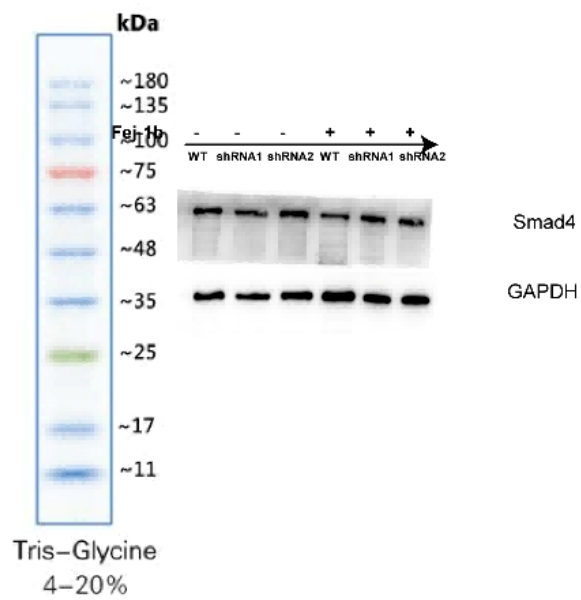
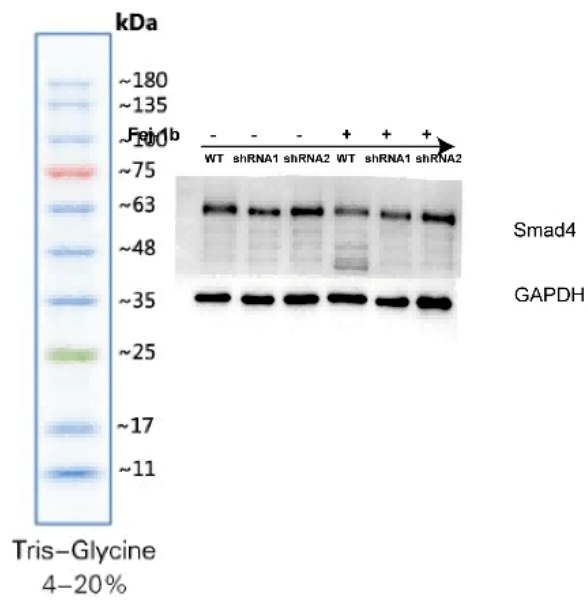
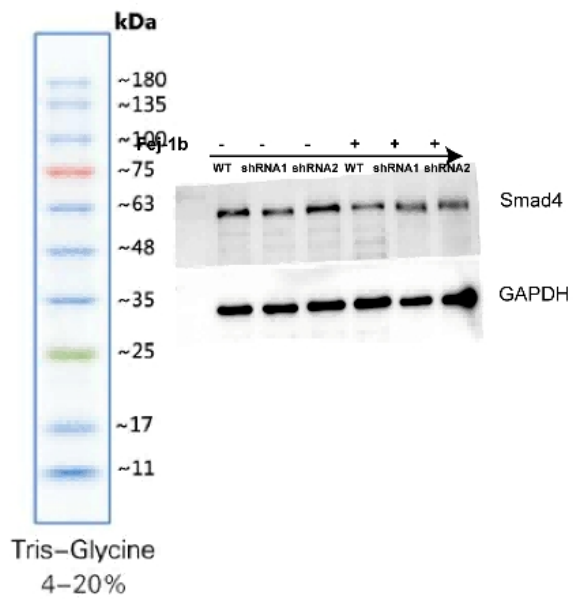


Fig.10. (E) Endogenous TGFBR2 association in HSFs was detected via Immunoprecipitation and immunoblot analysis (n = 3).

