

Background

ITCH is a HECT-type E3 ubiquitin ligase that regulates immune responses, skin homeostasis, and cancer by targeting key transcription and growth factors for ubiquitination. It plays a unique role in multiple cellular processes, including immune regulation, cell cycle control, and signal transduction. Its dysregulation has been linked to various diseases, making it a promising target for therapeutic intervention. Understanding the functions of ITCH provides valuable insights into the intricate mechanisms governing protein turnover and cellular function.

Alternate Names

AIP4, HECT-Type E3 Ubiquitin Transferase Itchy Homolog, E3 Ubiquitin-Protein Ligase Itchy Homolog, NFE2-Associated Polypeptide, NAPP1

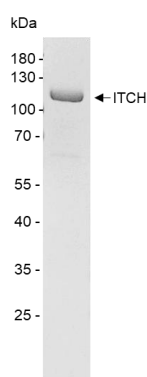
Application(s)

Ubiquitin ligation reactions

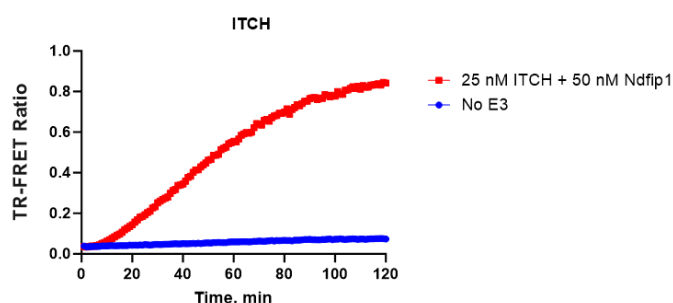
Product Specifications

| | |
|--------------------------|--|
| Affinity tag | His ₆ -SUMO |
| Purity | ≥ 95% by SDS-PAGE |
| Molecular Weight | 110 kDa |
| Quantity | 25 µg |
| Species | Human |
| Expression System | <i>E. coli</i> |
| Physical State | Liquid |
| Buffer | 20 mM Hepes pH 7.5, 150 mM NaCl, 10% glycerol |
| Activity | A typical enzyme concentration of 10-100 nM is used for in vitro conjugation, depending on assay conditions. |
| Storage | Store at -80° C. Avoid repeated freeze/thaw cycles |

Product QC



SDS-Page Analysis of purified ITCH. Two µg of the protein was loaded on a 10-20% SDS-PAGE gel and stained with Coomassie brilliant blue.



Activity Assay of ITCH. 25 nM ITCH + 50 nM Ndfip1 was tested in a TR-FRET assay and shows a robust signal-to-background.

References

1. Goto, J., et al., Hypertension, 2020. 76(6):1868-1878.
2. Stermer AR, et al., Experimental Biology and Medicine. 2016;241(4):367-74.

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