

SMURF2 Protein, Human (His)

Cat. No.:	HY-P701512
Synonyms:	SMURF2; E3 ubiquitin-protein ligase SMURF2; hSMURF2; HECT-type E3 ubiquitin transferase SMURF2; SMAD ubiquitination regulatory factor 2; SMAD-specific E3 ubiquitin-protein ligase 2
Species:	Human
Source:	E. coli
Accession:	Q9HAU4 (S2-E748)
Gene ID:	64750
Molecular Weight:	

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	<p>SMURF2 Protein, functioning as an E3 ubiquitin-protein ligase, operates by accepting ubiquitin from an E2 ubiquitin-conjugating enzyme and subsequently transferring ubiquitin directly to its targeted substrates. Notably, it interacts with SMAD7 to instigate SMAD7-mediated ubiquitin-dependent degradation of the transforming growth factor beta (TGF-beta) receptor, leading to the down-regulation of TGF-beta signaling. This interaction with SMAD7 not only triggers the degradation of the TGF-beta receptor but also activates SMURF2's autocatalytic degradation, a process antagonized by the association with AIMP1. Additionally, SMURF2 forms a stable complex with TGF-beta receptor-mediated phosphorylated SMAD1, SMAD2, and SMAD3, targeting SMAD1 and SMAD2 for ubiquitination and subsequent degradation. In the context of filovirus infections such as Ebola/EBOV and Marburg/MARV, SMURF2 collaborates with the viral matrix protein VP40 to facilitate virus budding. Furthermore, SMURF2 plays a critical role in negatively regulating TGFβ1-induced processes, including epithelial-mesenchymal transition and myofibroblast differentiation. This multifaceted functionality underscores the diverse regulatory roles of SMURF2 in cellular signaling and responses to infections.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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