

DESCRIPTION

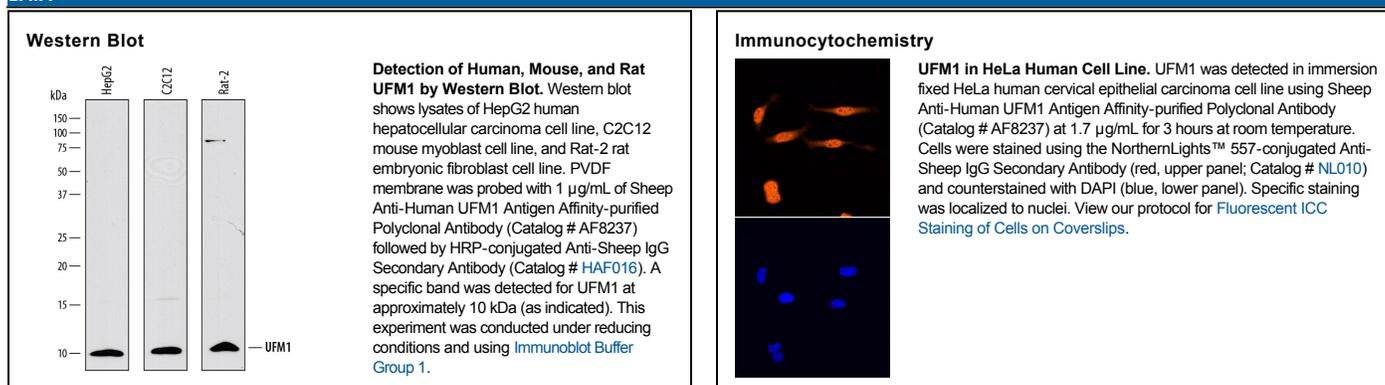
Species Reactivity	Human
Specificity	Detects human UFM1 in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human UFM1 Met1-Gly83 Accession # P61960
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunocytochemistry	5-15 µg/mL	See Below

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

UFM1 (Ubiquitin-fold modifier 1) is a 9.1 kDa ubiquitin-like protein, displaying a similar tertiary structure to ubiquitin. The UFM1 conjugation system is a novel Ubiquitin-like (Ubl) system whose physiological target(s) and biological functions remain largely undefined. To be activated, UFM1 is processed C-terminally by two specific proteases, UfSP1 and UfSP2. After processing, UFM1 is activated via the E1 enzyme, UBA5, and then conjugated by the E2 enzyme, UFC1. UFL1 has been identified as the E3 enzyme. However, cellular functions associated with target proteins that are modified by UFM1 are still unknown. Genetic study has demonstrated that the Ufm1-activating enzyme Uba5 is indispensable for erythroid differentiation in mice, highlighting the importance of this novel system in animal development. It was found that the UFM1 system was transcriptionally up-regulated by disturbance of the ER homeostasis and inhibition of vesicle trafficking.