

#9590 Store at -20°C

AMFR Antibody



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3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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Applications: WB, IP	Reactivity: H Mk Dg	Sensitivity: Endogenous	MW (kDa): 75	Source: Rabbit	UniProt ID: #Q9UKV5	Entrez-Gene Id: 267
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Product Usage Information	Application Western Blotting Immunoprecipitation	Dilution 1:1000 1:50
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.	
Specificity / Sensitivity	AMFR Antibody recognizes endogenous levels of total AMFR protein. This antibody does not cross-react with HRD1.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human AMFR protein. Antibodies are purified by protein A and peptide affinity chromatography.	
Background	Autocrine motility factor receptor (AMFR/gp78) is a putative seven transmembrane domain G protein-coupled receptor that functions, in part, at the cell surface as a cytokine receptor for autocrine motility factor/phosphoglucose isomerase (AMF/PGI). AMFR is also localized to an intracellular mitochondria-associated smooth ER domain where it functions as an E3 ubiquitin ligase (1). AMFR function, as both a cytokine receptor and ubiquitin ligase, is linked to a variety of cellular signaling cascades associated with metastasis development and increased invasiveness. AMFR was initially proposed to be a RING-H2 E3 ubiquitin ligase after sequence analysis identified a catalytic RING finger and CUE motif, which are responsible for ubiquitin ligase activity and ubiquitin binding, respectively (2,3). Indeed, AMFR is a key component and amongst the best characterized ubiquitin ligases of the endoplasmic reticulum associated degradation (ERAD) machinery, a process involving recognition of misfolded proteins, ubiquitination, deglycosylation, retro-translocation to the cytosol, and targeting to the proteasome (4). Recent studies have shown that AMFR plays an important role in cholesterol homeostasis via the sterol-mediated ubiquitination of HMG-CoA reductase and its cofactor Insig-1 (5,6). Furthermore, AMFR has been implicated in the degradation of apolipoprotein B100 (7). It was recently reported that AMFR degrades the metastasis suppressor KAI-1/CD-82, representing the first evidence that AMFR ubiquitin ligase activity is involved in metastasis development (8). Increased expression of AMFR correlates with a high incidence of recurrence and reduced survival in patients with bladder, colorectal, and gastric cancers (9-11).	
Background References	1. Registre, M. et al. (2004) <i>Biochem Biophys Res Commun</i> 320, 1316-22. 2. Shimizu, K. et al. (1999) <i>FEBS Lett</i> 456, 295-300. 3. Ponting, C.P. (2000) <i>Biochem J</i> 351 Pt 2, 527-35. 4. Meusser, B. et al. (2005) <i>Nat Cell Biol</i> 7, 766-72. 5. Song, B.L. et al. (2005) <i>Mol Cell</i> 19, 829-40. 6. Lee, J.N. et al. (2006) <i>J Biol Chem</i> 281, 39308-15. 7. Liang, J.S. et al. (2003) <i>J Biol Chem</i> 278, 23984-8. 8. Tsai, Y.C. et al. (2007) <i>Nat Med</i> 13, 1504-9. 9. Hirono, Y. et al. (1996) <i>Br J Cancer</i> 74, 2003-7. 10. Nakamori, S. et al. (1994) <i>Cancer</i> 74, 1855-62. 11. Otto, T. et al. (1997) <i>Am J Pathol</i> 150, 1919-23.	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Western Blot Buffer	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	WB: Western Blotting IP: Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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