

AMFR Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2162a

Product Information

| | |
|--------------------------|------------------------|
| Application | WB, IHC-P, FC, E |
| Primary Accession | Q9UKV5 |
| Other Accession | P26442 |
| Reactivity | Human |
| Host | Rabbit |
| Clonality | Polyclonal |
| Isotype | Rabbit IgG |
| Calculated MW | 72996 |
| Antigen Region | 571-601 |

Additional Information

| | |
|---------------------------|---|
| Gene ID | 267 |
| Other Names | E3 ubiquitin-protein ligase AMFR, 632-, Autocrine motility factor receptor, AMF receptor, RING finger protein 45, gp78, AMFR, RNF45 |
| Target/Specificity | This AMFR antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 571-601 amino acids of human AMFR. |
| Dilution | WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration. |
| Format | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS. |
| Storage | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| Precautions | AMFR Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures. |

Protein Information

| | |
|-----------------|---|
| Name | AMFR {ECO:0000303 PubMed:10456327, ECO:0000312 HGNC:HGNC:463} |
| Function | E3 ubiquitin-protein ligase that mediates the polyubiquitination of lysine and cysteine residues on target proteins, such as CD3D, CYP3A4, CFTR, INSIG1, SOAT2/ACAT2 and APOB for proteasomal degradation (PubMed: 10456327 , PubMed: 11724934 , PubMed: 12670940 , |

PubMed:[19103148](#), PubMed:[24424410](#), PubMed:[28604676](#)). Component of a VCP/p97-AMFR/gp78 complex that participates in the final step of endoplasmic reticulum-associated degradation (ERAD) (PubMed:[10456327](#), PubMed:[11724934](#), PubMed:[19103148](#), PubMed:[24424410](#)). The VCP/p97-AMFR/gp78 complex is involved in the sterol-accelerated ERAD degradation of HMGCR through binding to the HMGCR-INSIG1 complex at the ER membrane (PubMed:[16168377](#), PubMed:[22143767](#)). In addition, interaction of AMFR with AUP1 facilitates interaction of AMFR with ubiquitin-conjugating enzyme UBE2G2 and ubiquitin ligase RNF139, leading to sterol-induced HMGCR ubiquitination (PubMed:[23223569](#)). The ubiquitinated HMGCR is then released from the ER into the cytosol for subsequent destruction (PubMed:[16168377](#), PubMed:[22143767](#), PubMed:[23223569](#)). In addition to ubiquitination on lysine residues, catalyzes ubiquitination on cysteine residues: together with INSIG1, mediates polyubiquitination of SOAT2/ACAT2 at 'Cys-277', leading to its degradation when the lipid levels are low (PubMed:[28604676](#)). Catalyzes ubiquitination and subsequent degradation of INSIG1 when cells are depleted of sterols (PubMed:[17043353](#)). Mediates polyubiquitination of INSIG2 at 'Cys-215' in some tissues, leading to its degradation (PubMed:[31953408](#)). Also regulates ERAD through the ubiquitination of UBL4A a component of the BAG6/BAT3 complex (PubMed:[21636303](#)). Also acts as a scaffold protein to assemble a complex that couples ubiquitination, retranslocation and deglycosylation (PubMed:[21636303](#)). Mediates tumor invasion and metastasis as a receptor for the GPI/autocrine motility factor (PubMed:[10456327](#)). In association with LMBR1L and UBAC2, negatively regulates the canonical Wnt signaling pathway in the lymphocytes by promoting the ubiquitin-mediated degradation of CTNNB1 and Wnt receptors FZD6 and LRP6 (PubMed:[31073040](#)). Regulates NF-kappa-B and MAPK signaling pathways by mediating 'Lys-27'-linked polyubiquitination of TAB3 and promoting subsequent TAK1/MAP3K7 activation (PubMed:[36593296](#)). Required for proper lipid homeostasis (PubMed:[37119330](#)).

Cellular Location

Endoplasmic reticulum membrane; Multi-pass membrane protein.
Note=Palmitoylation promotes localization to the peripheral endoplasmic reticulum

Tissue Location

Widely expressed..

Background

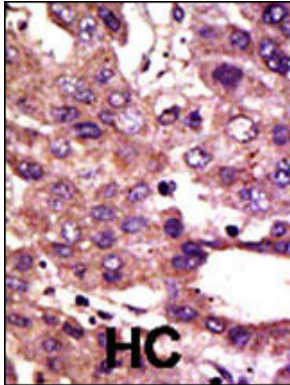
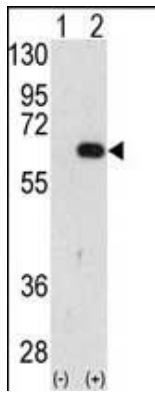
Autocrine motility factor (AMF) is a protein secreted by tumor cells that stimulates tumor motility. The gene for AMFR encodes a 323-amino acid polypeptide that has a single transmembrane domain and several putative glycosylation sites. The protein sequence has some homology to human tumor protein p53.

References

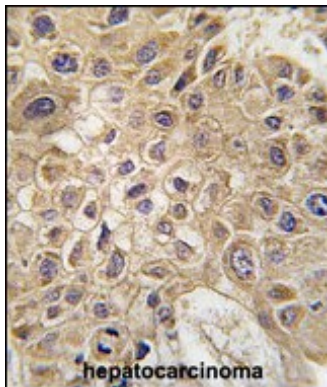
Huang, B., et al., *Biochem. Biophys. Res. Commun.* 212(3):727-742 (1995).
Watanabe, H., et al., *J. Biol. Chem.* 266(20):13442-13448 (1991).

Images

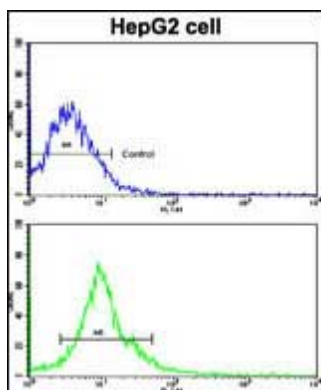
Western blot analysis of AMFR (arrow) using AMFR Antibody (C-term) (Cat.#AP2162a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the AMFR gene (Lane 2) (Origene Technologies).



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with AMFR Antibody (C-term) (Cat.#AP2162a), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Flow cytometric analysis of HepG2 cells using AMFR Antibody (C-term)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Citations

- [Giant cell tumors of the bone: molecular profiling and expression analysis of Ephrin A1 receptor, Claudin 7, CD52, FGFR3 and AMFR.](#)
- [Phosphoglucose isomerase/autocrine motility factor promotes melanoma cell migration through ERK activation dependent on autocrine production of interleukin-8.](#)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.