

GP78-1/2 (N-18): sc-21562

BACKGROUND

GP78 is the autocrine motility factor (AMF) receptor. AMF (also known as neuroleukin or NLK) is a tumor-secreted cytokine that induces *in vivo* invasion and metastasis. AMF induces tumor cell motility *in vitro* through interaction with GP78. GP78 is distributed evenly across the membranes of normal cells but localizes to the leading and trailing edges of carcinoma cells. In gastric cancer, GP78 surface expression correlates to the pathologic stage and grade of tumor penetration. AMF and GP78 interactions may be involved in a synaptic mechanism for learning and memory formation. GP78 and AMF expression increases in the hippocampi of rats after maze learning. Specifically, GP78 is a RING finger-dependent ubiquitin protein ligase (E3) of the endoplasmic reticulum (ER). GP78 recruits UBC7, an ubiquitin-conjugating enzyme (E2). The E3 activity of GP78 suggests a possible link between metastasis and ubiquitin-mediated protein degradation. In humans, alternative splicing of the GP78 mRNA gives rise to two distinct isoforms, 1 and 2, a type I membrane protein and an integral membrane protein, respectively.

REFERENCES

1. Watanabe, H., et al. 1991. Purification of human tumor cell autocrine motility factor and molecular cloning of its receptor. *J. Biol. Chem.* 266: 13442-13448.
2. Silletti, S., et al. 1993. Autocrine motility factor receptor in human bladder carcinoma: gene expression, loss of cell-contact regulation and chromosomal mapping. *Int. J. Oncol.* 3: 801-807.
3. Hirono, Y., et al. 1996. Expression of autocrine motility factor receptor correlates with disease progression in human gastric cancer. *Br. J. Cancer* 74: 2004-2007.
4. Fang, S., et al. 2001. The tumor autocrine motility factor receptor, GP78, is a ubiquitin protein ligase implicated in degradation from the endoplasmic reticulum. *Proc. Natl. Acad. Sci. USA* 98: 14422-14427.
5. Luo, Y., et al. 2002. A link between maze learning and hippocampal expression of neuroleukin and its receptor GP78. *J. Neurochem.* 80: 354-361.

CHROMOSOMAL LOCATION

Genetic locus: AMFR (human) mapping to 16q12.2.

SOURCE

GP78-1/2 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of GP78-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-21562 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

GP78-1/2 (N-18) is recommended for detection of GP78 isoforms 1 and 2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GP78 siRNA (h): sc-43809, GP78 shRNA Plasmid (h): sc-43809-SH and GP78 shRNA (h) Lentiviral Particles: sc-43809-V.

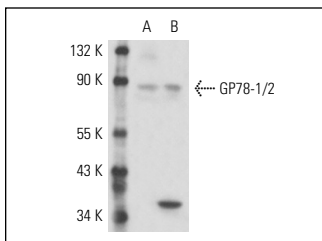
Molecular Weight of GP78-1/2: 78 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or CCD-1064Sk cell lysate: sc-2263.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



GP78-1/2 (N-18): sc-21562. Western blot analysis of GP78-1 and GP78-2 expression in Jurkat (A) and CCD-1064Sk (B) whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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Try **GP78-1 (F-3): sc-166358** or **GP78 (3D9): sc-293371**, our highly recommended monoclonal alternatives to GP78-1/2 (N-18).