**BACKGROUND**

GP78 is the autocrine motility factor (AMF) receptor. AMF (also known as nerveleukin 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**


**CHROMOSOMAL LOCATION**

Genetic locus: AMFR (human) mapping to 16q12.2; Amfr (mouse) mapping to 8 C5.

**SOURCE**

GP78-1 (F-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 87-116 within an internal region of GP78-1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GP78-1 (F-3) is available conjugated to agarose (sc-166358 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166358 HRP), 200 µg/ml, for WB, IP, and ELISA; to either phycocyanin (sc-166358 PE), fluorescein (sc-166358 FITC), Alexa Fluor® 488 (sc-166358 AF488), Alexa Fluor® 546 (sc-166358 AF546), Alexa Fluor® 594 (sc-166358 AF594) or Alexa Fluor® 647 (sc-166358 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 880 (sc-166358 AF880) or Alexa Fluor® 790 (sc-166358 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166358 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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**APPLICATIONS**

GP78-1 (F-3) is recommended for detection of GP78 isoform 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 siRNA (m): sc-44579, GP78 shRNA Plasmid (h): sc-43809-SH, GP78 shRNA Plasmid (m): sc-44579-SH, GP78 shRNA (h) Lentiviral Particles: sc-43809-V and GP78 shRNA (m) Lentiviral Particles: sc-44579-V.

Molecular Weight of GP78-1: 78 kDa.

Positive Controls: Ramos cell lysate: sc-2216, Hep G2 cell lysate: sc-2227 or MCF7 whole cell lysate: sc-2206.

**DATA**

GP78-1 (F-3): sc-166358. Western blot analysis of GP78-1 expression in Ramos whole cell lysate.

**SELECT PRODUCT CITATIONS**


**STORAGE**

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

**RESEARCH USE**

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

**PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.