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EGFR Monoclonal Antibody (H11)

Catalog Number **MA5-13070**

Product data sheet

Details	
Size	500 µL
Host/Isotope	Mouse / IgG1, kappa
Class	Monoclonal
Type	Antibody
Clone	H11
Immunogen	HC2 20 d2 cells
Conjugate	Unconjugated
Form	Liquid
Concentration	0.2 mg/mL
Purification	Protein G
Storage buffer	PBS, pH 7.4, with 0.2% BSA
Contains	0.09% sodium azide
Storage Conditions	4° C

Species Reactivity	
Species reactivity	Human, Mouse
Published species	Human, Mouse, Not Applicable

Tested Applications	Dilution *
Flow Cytometry (Flow)	0.5-1 µg/test
Immunohistochemistry (Paraffin) (IHC (P))	2-4 µg/mL
Immunoprecipitation (IP)	2 µg/mL
Western Blot (WB)	0.5-1.0 µg/mL
Immunocytochemistry (ICC/IF)	2 µg/mL

Published Applications	
Immunohistochemistry (IHC)	See 2 publications below
Western Blot (WB)	See 29 publications below
Miscellaneous PubMed (Misc)	See 1 publications below
Immunohistochemistry (Paraffin) (IHC (P))	See 1 publications below
Immunocytochemistry (ICC/IF)	See 5 publications below
In vitro Assay (IV)	See 1 publications below
Neutralization (Neu)	See 2 publications below
Immunoprecipitation (IP)	See 3 publications below
ELISA (ELISA)	See 2 publications below
Flow Cytometry (Flow)	See 3 publications below
Gel Shift (GS)	See 1 publications below

* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.

Product specific information

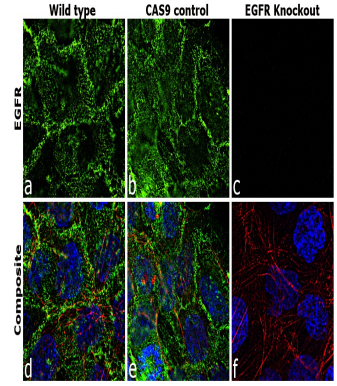
MA5-13070 targets Epidermal Growth Factor Receptor in FACS, ICC/IF, IHC (P), IP, and WB applications and shows reactivity with Human and Mouse samples. This antibody is not recommended for mouse lymph node tissue or human breast carcinoma in IHC applications. The MA5-13070 immunogen is hC2 20 d2 cells.

Background/Target Information

EGFR, epidermal growth factor receptor, is a receptor tyrosine kinases that signals in response to various growth factors. Overexpression has been linked to numerous types of cancer and EGFR is the target of both biological and small molecular therapeutics. EGFR is encoded by the EGFR gene located on chromosome 7 in humans. EGFR belongs to the HER/ERbB family of proteins that includes three other receptor tyrosine kinases, ERbB2, ERbB3, ERbB4. EGFR is a transmembrane receptor and binding of its cognate ligands such as EGF (Epidermal Growth Factor) and TGF alpha (Transforming Growth Factor alpha) to the extracellular domain leads to EGFR dimerization followed by autophosphorylation of the tyrosine residues in the cytoplasmic domain. Overexpression is observed in tumors of the head and neck, brain, bladder, stomach, breast, lung, endometrium, cervix, vulva, ovary, esophagus, stomach and in squamous cell carcinoma.

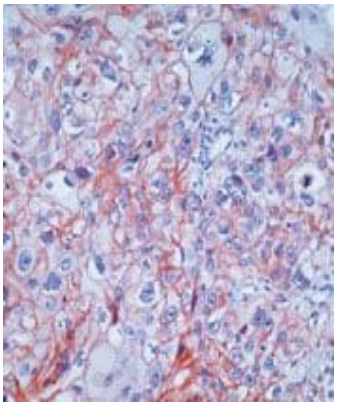
For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

Product Images For EGFR Monoclonal Antibody (H11)



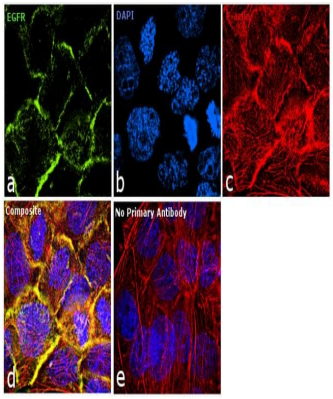
EGFR Antibody (MA5-13070)

Altered expression of target protein upon Knockout demonstrates antibody specificity. Immunofluorescence analysis of EGFR using Anti-EGFR Mouse monoclonal Antibody (Product # MA5-13070) shows no expression in A-431 EGFR knockout cells. {KO}



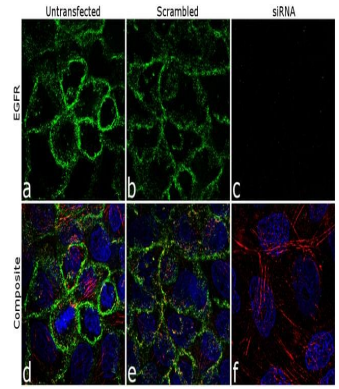
EGFR Antibody (MA5-13070) in IHC (P)

Formalin-fixed, paraffin-embedded human squamous cell carcinoma of lung stained with EGFR antibody using peroxidase-conjugate and AEC chromogen. Note cell membrane staining of tumor cells.



EGFR Antibody (MA5-13070) in ICC/IF

Immunofluorescence analysis of EGFR was performed using 90% confluent log phase A-431 cells. The cells were fixed with 4% paraformaldehyde for 10 minutes, permeabilized with 0.1% Triton™ X-100 for 10 minutes, and blocked with 1% BSA for 1 hour at room temperature. The cells were labeled with EGFR Mouse monoclonal antibody (Product # MA5-13070) at 2 µg/mL in 0.1% BSA and incubated for 3 hours at room temperature and then labeled with Goat anti-Mouse IgG (H+L) Superclonal™ Secondary Antibody, Alexa Fluor® 488 conjugate (Product # A28175) at a dilution of 1:2000 for 45 minutes at room temperature (Panel a: green). Nuclei (Panel b: blue) were stained with SlowFade® Gold Antifade Mountant with DAPI (Product # S36938). F-actin (Panel c: red) was stained with Rhodamine Phalloidin (Product # R415, 1:300). Panel d represents the merged image showing membrane localization. Panel e shows the no primary antibody control. The images were captured at 60X magnification.



EGFR Antibody (MA5-13070)

Antibody specificity was demonstrated by siRNA mediated knockdown of target protein. A-431 cells were transfected with EGFR siRNA and decrease of signal was observed in immunofluorescence application using EGFR Mouse Monoclonal antibody (Product # MA5-13070). {KD}

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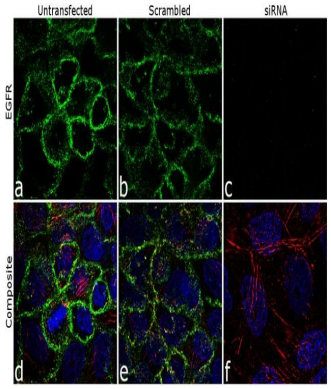
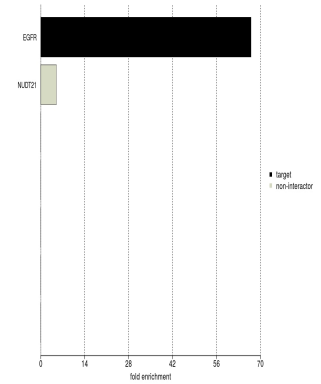


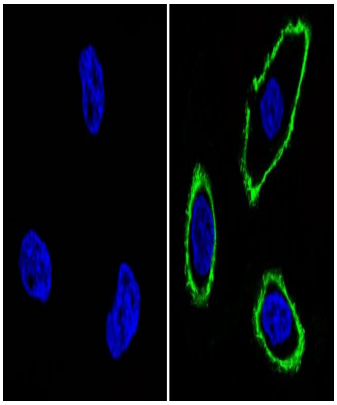
EGFR Antibody (MA5-13070) in ICC/IF

Knockdown of EGFR was achieved by transfecting A-431 cells with EGFR specific siRNA (Silencer® select Product # s563, s564 and s565). Immunofluorescence analysis was performed on A431 cells (untransfected, panel a,d), transfected with non-specific scrambled siRNA (panels b,e) and transfected with EGFR specific siRNA (panel c,f) Cells were fixed, permeabilized, and labelled with EGFR Mouse monoclonal Antibody (Product # MA5-13070, 5 µg /mL), followed by Goat anti-Mouse IgG (H+L) Superclonal™ Secondary Antibody, Alexa Fluor® 488 conjugate (Product # A28175, 1:2000). Nuclei (blue) were stained using SlowFade® Gold Antifade Mountant with DAPI (Product # S36938), and Rhodamine Phalloidin (Product # R415, 1:300) was used for cytoskeletal F-actin (red) staining. Loss of signal was observed upon siRNA mediated knockdown (panel c,f) confirming specificity of the antibody to EGFR (green). The images were captured at 60X magnification.



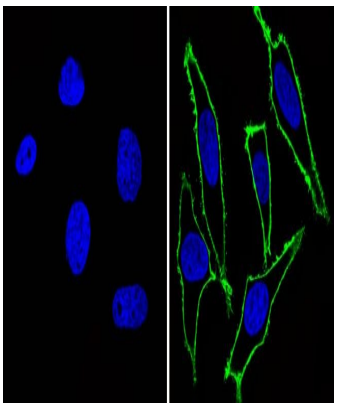
EGFR Antibody (MA5-13070)

IP-MS enrichment of EGFR (LFQ intensity): EGFR was enriched 67-fold from A549 lysate compared to background proteins, using the optimized IP-MS workflow with Pierce MS-Compatible Magnetic IP Kit protein A/G (Product # 90409) and EGFR antibody (Product # MA5-13070). The STRING database (www.string-db.org) was used to identify the protein interactor list. See more information on IP-MS verification of antibody selectivity. {IP-MS}



EGFR Antibody (MA5-13070) in ICC/IF

Immunofluorescent analysis of Epidermal Growth Factor Receptor (green) showing staining in the membrane of A431 cells (right) compared to a negative control without primary antibody (left). Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with an Epidermal Growth Factor Receptor monoclonal antibody (Product # MA5-13070) in 3% BSA-PBS at a dilution of 1:100 and incubated overnight at 4 ºC in a humidified chamber. Cells were washed with PBST and incubated with a DyLight-conjugated secondary antibody in PBS at room temperature in the dark. F-actin (red) was stained with a fluorescent red phalloidin and nuclei (blue) were stained with Hoechst or DAPI. Images were taken at a magnification of 60x.



EGFR Antibody (MA5-13070) in ICC/IF

Immunofluorescent analysis of Epidermal Growth Factor Receptor (green) showing staining in the membrane of Hela cells (right) compared to a negative control without primary antibody (left). Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with an Epidermal Growth Factor Receptor monoclonal antibody (Product # MA5-13070) in 3% BSA-PBS at a dilution of 1:100 and incubated overnight at 4 ºC in a humidified chamber. Cells were washed with PBST and incubated with a DyLight-conjugated secondary antibody in PBS at room temperature in the dark. F-actin (red) was stained with a fluorescent red phalloidin and nuclei (blue) were stained with Hoechst or DAPI. Images were taken at a magnification of 60x.

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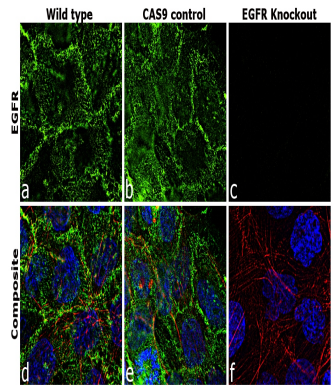
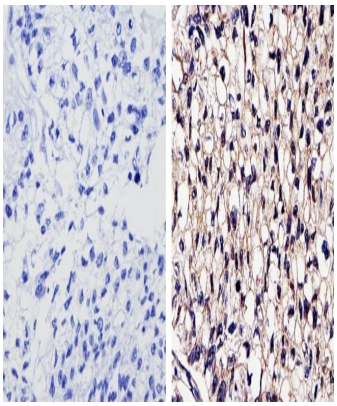


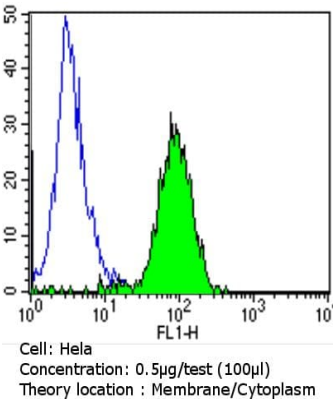
EGFR Antibody (MA5-13070) in ICC/IF

Immunofluorescence analysis of EGFR was performed using 70% confluent log phase A-431 cells (WIld type, panels a,d), CAS9 control (panels b,e) and EGFR Knockout (panels c,f). The cells were fixed, permeabilized, and labelled with EGFR Mouse Monoclonal Antibody(Product # MA5-13070, 5 µg/mL), followed by Goat anti-Mouse IgG (H+L) Superclonal™ Secondary Antibody, Alexa Fluor® 488 conjugate (Product # A28175, 1:2000). Nuclei (blue) were stained with SlowFade® Gold Antifade Mountant with DAPI (Product # S36938) and Rhodamine Phalloidin (Product # R415, 1:300) was used for cytoskeletal F-actin (red) staining. Loss of signal was observed in EGFR Knockout cells (panel c,f) confirming specificity of the antibody to EGFR(green). The images were captured at 60X magnification.



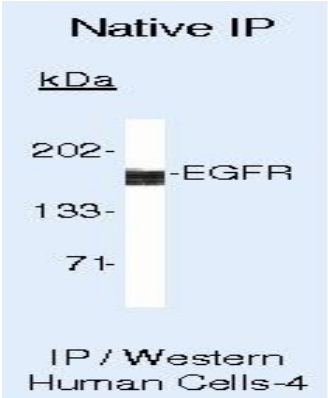
EGFR Antibody (MA5-13070) in IHC (P)

Immunohistochemistry analysis of EGFR showing staining in the membrane and cytoplasm of paraffin-treated human lung carcinoma (right) compared with a negative control in the absence of primary antibody (left). To expose target proteins, antigen retrieval was performed using 10mM sodium citrate (pH 6.0), microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H2O2-methanol for 15 min at room temperature, washed with ddH2O and PBS, and then probed with a Epidermal Growth Factor Receptor monoclonal antibody (Product # MA5-13070) diluted by 3% BSA-PBS at a dilution of 1:50 overnight at 4°C in a humidified chamber. Tissues were washed extensively in PBST and detection was performed using an HRP-conjugated secondary antibody followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.



EGFR Antibody (MA5-13070) in Flow

Flow cytometry analysis of Epidermal Growth Factor Receptor in Hela cells compared to an isotype control (blue). Cells were harvested, adjusted to a concentration of 1-5x10^6 cells/mL, fixed with 2% paraformaldehyde and washed with PBS. Cells were blocked with a 2% solution of BSA-PBS for 30 min at room temperature and incubated with a Epidermal Growth Factor Receptor monoclonal antibody (Product # MA5-13070) at a dilution of 0.5 µg/test for 60 min at room temperature. Cells were then incubated for 40 min at room temperature in the dark using a Dylight 488-conjugated goat anti-mouse IgG (H+L) secondary antibody and re-suspended in PBS for FACS analysis.



EGFR Antibody (MA5-13070) in IP

Immunoprecipitation of Epidermal Growth Factor Receptor using Epidermal Growth Factor Receptor Monoclonal Antibody (Product # MA5-13070) on Native Human A431 Cells.

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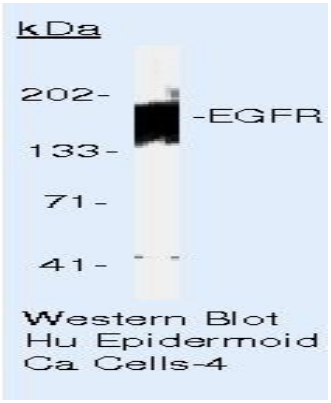
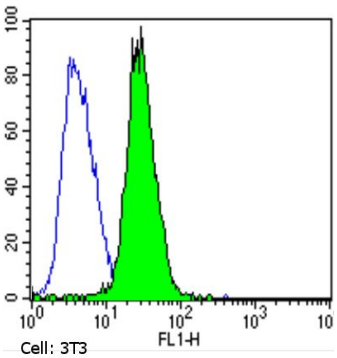


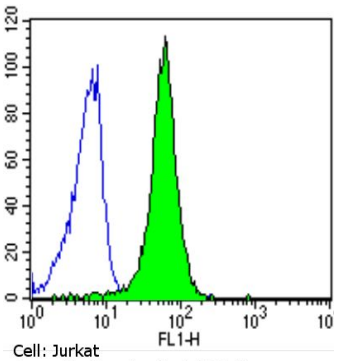
EGFR Antibody (MA5-13070) in WB

Western blot of Epidermal Growth Factor Receptor using Epidermal Growth Factor Receptor Monoclonal Antibody (Product # MA5-13070) on Human Epidermoid.



EGFR Antibody (MA5-13070) in Flow

Flow cytometry analysis of Epidermal Growth Factor Receptor in NIH/3T3 cells compared to an isotype control (blue). Cells were harvested, adjusted to a concentration of 1-5x10^6 cells/mL, fixed with 2% paraformaldehyde and washed with PBS. Cells were blocked with a 2% solution of BSA-PBS for 30 min at room temperature and incubated with a Epidermal Growth Factor Receptor monoclonal antibody (Product # MA5-13070) at a dilution of 0.5 µg/test for 60 min at room temperature. Cells were then incubated for 40 min at room temperature in the dark using a Dylight 488-conjugated goat anti-mouse IgG (H+L) secondary antibody and re-suspended in PBS for FACS analysis.



EGFR Antibody (MA5-13070) in Flow

Flow cytometry analysis of Epidermal Growth Factor Receptor in Jurkat cells compared to an isotype control (blue). Cells were harvested, adjusted to a concentration of 1-5x10^6 cells/mL, fixed with 2% paraformaldehyde and washed with PBS. Cells were blocked with a 2% solution of BSA-PBS for 30 min at room temperature and incubated with a Epidermal Growth Factor Receptor monoclonal antibody (Product # MA5-13070) at a dilution of 1 µg/test for 60 min at room temperature. Cells were then incubated for 40 min at room temperature in the dark using a Dylight 488-conjugated goat anti-mouse IgG (H+L) secondary antibody and re-suspended in PBS for FACS analysis.

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PubMed References For EGFR Monoclonal Antibody (H11)

2 Immunohistochemistry References

Species / Dilution	Summary
Mouse / 1:500	MA5-13070 was used in immunohistochemistry to describe an EGF receptor mutant with tandem kinase domain duplication in glioblastoma multiforme biopsies and cell lines Oncogene (2010; 29: 855) **"Activity and cellular localization of an oncogenic glioblastoma multiforme-associated EGF receptor mutant possessing a duplicated kinase domain."** Author(s):Ozer BH,Wiepz GJ,Bertics PJ PubMed Article URL:http://dx.doi.org/10.1038/onc.2009.385
Human / 1:50	MA5-13070 was used in Immunohistochemistry-immunofluorescence to indicate that the combination of IMP3 and BCL-2 may be of diagnostic utility in distinguishing between ISK and SCCIS in daily clinical practice. Journal of cutaneous pathology (2018; 45: 603) **"Distinguishing between irritated seborrheic keratosis and squamous cell carcinoma in situ using BCL-2 and IMP3 immunohistochemistry."** Author(s):Richey JD,Deng AC,Dresser K,O'Donnell P,Cornejo KM PubMed Article URL:http://dx.doi.org/10.1111/cup.13269

29 Western Blot References

Species / Dilution	Summary
Human / Not Cited	MA5-13070 was used in western blot to study the effect of miR-200 expression on the epithelial-to-mesenchymal transition and resistance to EGFR therapy in bladder cancer cells Clinical cancer research : an official journal of the American Association for Cancer Research (2009; 15: 5060) **"miR-200 expression regulates epithelial-to-mesenchymal transition in bladder cancer cells and reverses resistance to epidermal growth factor receptor therapy."** Author(s):Adam L,Zhong M,Choi W,Qi W,Nicoloso M,Arora A,Calin G,Wang H,Siefker-Radtke A,McConkey D,Bar-Eli M, Dinney C PubMed Article URL:http://dx.doi.org/10.1158/1078-0432.CCR-08-2245
Human / Not Cited	MA513070 was used in immunohistochemistry and western blot to determine that MUC1 stimulates epidermal growth factor receptor expression and function in endometrial cancer Oncotarget (2016; 7: 32796) **"MUC1 stimulates EGFR expression and function in endometrial cancer."** Author(s):Engel BJ,Bowser JL,Broaddus RR,Carson DD PubMed Article URL:http://dx.doi.org/10.18632/oncotarget.8743
Human / Not Cited	MA5-13070 was used in western blot to study the role of cortactin overexpression in increasing invasion potential in oral squamous cell carcinoma Pathology oncology research : POR (2010; 16: 523) **"Overexpression of cortactin increases invasion potential in oral squamous cell carcinoma."** Author(s):Yamada S,Yanamoto S,Kawasaki G,Mizuno A,Nemoto TK PubMed Article URL:http://dx.doi.org/10.1007/s12253-009-9245-y
Human / 1:50	MA5-13070 was used in western blot to study whether gene silencing by vector-mediated RNAi inhibition of EGFR expression can reduce the growth of cultured human glioma cells Molecular therapy : the journal of the American Society of Gene Therapy (2005; 12: 803) **"Herpes simplex virus 1 amplicon vector-mediated siRNA targeting epidermal growth factor receptor inhibits growth of human glioma cells in vivo."** Author(s):Saydam O,Glauser DL,Heid I,Turkeri G,Hilbe M,Jacobs AH,Ackermann M,Fraefel C PubMed Article URL:http://dx.doi.org/10.1016/j.ymthe.2005.07.534
Human / 1:3000	MA5-13070 was used in western blot to study the mechanism of resistance to the EGFR tyrosine kinase inhibitor Gefitinib in bladder cancer cells Cancer research (2005; 65: 10524) **"Uncoupling between epidermal growth factor receptor and downstream signals defines resistance to the antiproliferative effect of Gefitinib in bladder cancer cells."** Author(s):Kassouf W,Dinney CP,Brown G,McConkey DJ,Diehl AJ,Bar-Eli M,Adam L PubMed Article URL:http://dx.doi.org/10.1158/0008-5472.CAN-05-1536
Human / 1:2000	MA5-13070 was used in western blot to investigate the relationship between SGLT1 and EGFR gene expression and tumor differetiation in oral squamous cell carcinoma Odontology (2012; 100: 156) **"Coexpression of SGLT1 and EGFR is associated with tumor differentiation in oral squamous cell carcinoma."** Author(s):Hanabata Y,Nakajima Y,Morita K,Kayamori K,Omura K PubMed Article URL:http://dx.doi.org/10.1007/s10266-011-0033-2

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Mouse / Not Cited	MA5-13070 was used in western blot to study the role of a constitutively active variant of the EGFR in increasing mouse fibroblast motility International journal of cancer (2004; 108: 643) **"Expression of a naturally occurring constitutively active variant of the epidermal growth factor receptor in mouse fibroblasts increases motility."** Author(s):Pedersen MW,Tkach V,Pedersen N,Berezin V,Poulsen HS PubMed Article URL:http://dx.doi.org/10.1002/ijc.11566
Human / Not Cited	MA5-13070 was used in western blot to study the efficacy of a dual PI3 kinase/mTOR inhibitor in glioma Cancer cell (2006; 9: 341) **"A dual PI3 kinase/mTOR inhibitor reveals emergent efficacy in glioma."** Author(s):Fan QW,Knight ZA,Goldenberg DD,Yu W,Mostov KE,Stokoe D,Shokat KM,Weiss WA PubMed Article URL:http://dx.doi.org/10.1016/j.ccr.2006.03.029
Human / Not Cited	MA5-13070 was used in western blot to study the effect of ADAM17 silencing on multiple acquired renal carcinoma tumor capabilities Cancer research (2006; 66: 8083) **"Multiple acquired renal carcinoma tumor capabilities abolished upon silencing of ADAM17."** Author(s):Franovic A,Robert I,Smith K,Kurban G,Pause A,Gunaratnam L,Lee S PubMed Article URL:http://dx.doi.org/10.1158/0008-5472.CAN-06-1595
Human / 1:1000	MA5-13070 was used in western blot to investigate the effect of heterogenous nuclear ribonucleoprotein D-like protein on androgen-independent LNCaP cell proliferation Cell biochemistry and function (2008; 26: 467) **"Overexpression of JKTBP1 induces androgen-independent LNCaP cell proliferation through activation of epidermal growth factor-receptor (EGF-R)."** Author(s):Wu YY,Li H,Lv XY,Wei Q,Li X,Liu XY,Zhou Q,Wei YQ PubMed Article URL:http://dx.doi.org/10.1002/cbf.1468
Human / 1:500	MA5-13070 was used in western blot to determine the minimal period of melatonin treatment required to induce the differentiation of human mesenchymal stem cells into osteoblasts Journal of pineal research (2010; 49: 222) **"Determination of the minimal melatonin exposure required to induce osteoblast differentiation from human mesenchymal stem cells and these effects on downstream signaling pathways."** Author(s):Sethi S,Radio NM,Kotlarczyk MP,Chen CT,Wei YH,Jockers R,Witt-Enderby PA PubMed Article URL:http://dx.doi.org/10.1111/j.1600-079X.2010.00784.x
Human / 1:200-1000	MA5-13070 was used in western blot to study molecular markers of the response to cetuximab therapy in a panel of urothelial carcinoma cell lines Clinical cancer research : an official journal of the American Association for Cancer Research (2008; 14: 1478) **"Sensitivity to epidermal growth factor receptor inhibitor requires E-cadherin expression in urothelial carcinoma cells."** Author(s):Black PC,Brown GA,Inamoto T,Shrader M,Arora A,Siefker-Radtke AO,Adam L,Theodorescu D,Wu X,Munsell MF,Bar-Eli M,McConkey DJ,Dinney CP PubMed Article URL:http://dx.doi.org/10.1158/1078-0432.CCR-07-1593
Human / Not Cited	MA5-13070 was used in western blot to investigate the effect of a novel toll-like receptor 9 agonist on epidermal growth factor receptor inhibition and on tumor growth Clinical cancer research : an official journal of the American Association for Cancer Research (2006; 12: 577) **"Novel toll-like receptor 9 agonist induces epidermal growth factor receptor (EGFR) inhibition and synergistic antitumor activity with EGFR inhibitors."** Author(s):Damiano V,Caputo R,Bianco R,D'Armiento FP,Leonardi A,De Placido S,Bianco AR,Agrawal S,Ciardiello F,Tortora G PubMed Article URL:http://dx.doi.org/10.1158/1078-0432.CCR-05-1943
Human / Not Cited	MA5-13070 was used in western blot to study the anti-tumor mechanism of a unimolecular combination of an EGFR tyrosine kinase inhibitor and a DNA damaging triazine The Journal of pharmacology and experimental therapeutics (2004; 311: 1163) **"The combi-targeting concept: dissection of the binary mechanism of action of the combi-triazene SMA41 in vitro and antitumor activity in vivo."** Author(s):Matheson SL,McNamee JP,Wang T,Alaoui-Jamali MA,Tari AM,Jean-Claude BJ PubMed Article URL:http://dx.doi.org/10.1124/jpet.104.071977

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	MA5-13070 was used in western blot to study the effect of combined treatment with erlotinib and bevacizumab against melanoma
Human / Not Cited	Clinical cancer research : an official journal of the American Association for Cancer Research (2009; 15: 3495) **"Erlotinib and bevacizumab have synergistic activity against melanoma."** Author(s):Schicher N,Paulitschke V,Swoboda A,Kunstfeld R,Loewe R,Pilarski P,Pehamberger H,Hoeller C PubMed Article URL:http://dx.doi.org/10.1158/1078-0432.CCR-08-2407
	MA5-13070 was used in western blot to study the EGFR-targeting potential of novel triazolinium-containing "combi-molecules
Human / Not Cited	Anti-cancer drugs (2007; 18: 171) **"Type II combi-molecules: design and binary targeting properties of the novel triazolinium-containing molecules JDD36 and JDE05."** Author(s):Qiu Q,Domarkas J,Banerjee R,Katsoulas A,McNamee JP,Jean-Claude BJ PubMed Article URL:http://dx.doi.org/10.1097/CAD.0b013e3280115fe8
	MA5-13070 was used in western blot to investigate the characteristics of neuregulin in human ovarian cancer cells
Human / 1.5 µg/mL	Clinical cancer research : an official journal of the American Association for Cancer Research (2002; 8: 3933) **"Neuregulin expression, function, and signaling in human ovarian cancer cells."** Author(s):Gilmour LM,Macleod KG,McCaig A,Sewell JM,Gullick WJ,Smyth JF,Langdon SP PubMed Article URL:http://www.ncbi.nlm.nih.gov/pubmed/12473609
	MA5-13070 was used in Western Blot to review the recent nanobiotechnological advancements that combine the promise of photodynamic therapy with EGFR-targeted molecular cancer therapy.
Human / 1:1000	Pharmaceutics (2022; 14:) **"EGFR-Targeted Photodynamic Therapy."** Author(s):Ulfo L,Costantini PE,Di Giosia M,Danielli A,Calvaresi M PubMed Article URL:http://dx.doi.org/10.3390/pharmaceutics14020241
	MA5-13070 was used in western blot to study the role of PDGF signaling in the inhibition of osteosarcoma cell proliferation by sennoside B
Human / Not Cited	Life sciences (2009; 84: 915) **"Sennoside B inhibits PDGF receptor signaling and cell proliferation induced by PDGF-BB in human osteosarcoma cells."** Author(s):Chen YC,Chang CN,Hsu HC,Chiou SJ,Lee LT,Hseu TH PubMed Article URL:http://dx.doi.org/10.1016/j.lfs.2009.04.003
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Human / Not Cited	The Journal of biological chemistry (1998; 273: 1568) **"Physical interaction between epidermal growth factor receptor and DNA-dependent protein kinase in mammalian cells."** Author(s):Bandyopadhyay D,Mandal M,Adam L,Mendelsohn J,Kumar R PubMed Article URL:http://dx.doi.org/10.1074/jbc.273.3.1568
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Human / Not Cited	Medical oncology (Northwood, London, England) (2010; 27: 853) **"Evaluation of PTEN and Mcl-1 expressions in NSCLC expressing wild-type or mutated EGFR."** Author(s):Cetin Z,Ozbilim G,Erdogan A,Luleci G,Karauzum SB PubMed Article URL:http://dx.doi.org/10.1007/s12032-009-9296-7
	MA5-13070 was used in western blot to study the induction of antibody-dependent cell-mediated cytotoxicity in HER-2-non-amplified breast cancer cells by trastuzumab
Human / Not Cited	Annals of oncology : official journal of the European Society for Medical Oncology (2012; 23: 1788) **"Trastuzumab induces antibody-dependent cell-mediated cytotoxicity (ADCC) in HER-2-non-amplified breast cancer cell lines."** Author(s):Collins DM,O'Donovan N,McGowan PM,O'Sullivan F,Duffy MJ,Crown J PubMed Article URL:http://dx.doi.org/10.1093/annonc/mdr484
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Human / Not Cited	The Journal of pharmacology and experimental therapeutics (2002; 303: 238) **"Inhibition of epidermal growth factor receptor-mediated signaling by "Combi-triazene" BJ2000, a new probe for Combi-Targeting postulates."** Author(s):Brahimi F,Matheson SL,Dudouit F,McNamee JP,Tari AM,Jean-Claude BJ PubMed Article URL:http://dx.doi.org/10.1124/jpet.102.039099

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	MA5-13070 was used in western blot to investigate brain tumor exosomes by biochemical, proteomic, and immunological approaches
Human / Not Cited	FASEB journal : official publication of the Federation of American Societies for Experimental Biology (2009; 23: 1541) **"Proteomic and immunologic analyses of brain tumor exosomes."** Author(s):Graner MW,Alzate O,Dechkovskaia AM,Keene JD,Sampson JH,Mitchell DA,Bigner DD PubMed Article URL:http://dx.doi.org/10.1096/fj.08-122184
Human / Not Cited	MA5-13070 was used in western blot to study the use of adenovirus-mediated overexpression of dominant negative EGFR to radiosensitize human carcinoma and malignant glioma cells
	International journal of radiation oncology, biology, physics (2001; 51: 775) **"Adenovirus-mediated overexpression of dominant negative epidermal growth factor receptor-CD533 as a gene therapeutic approach radiosensitizes human carcinoma and malignant glioma cells."** Author(s):Lammering G,Lin PS,Contessa JN,Hampton JL,Valerie K,Schmidt-Ullrich RK PubMed Article URL:http://dx.doi.org/10.1016/s0360-3016(01)01714-x
Human / 1:200	MA5-13070 was used in western blot to investigate the effect of apoptotic proteins on the radiosensitivity of oral squamous carcinoma cell line
	Head & neck (2007; 29: 325) **"Radiotherapy response in oral squamous carcinoma cell lines: evaluation of apoptotic proteins as prognostic factors."** Author(s):Roberg K,Jonsson AC,Grénman R,Norberg-Spaak L PubMed Article URL:http://dx.doi.org/10.1002/hed.20520
Human / 1:100	MA5-13070 was used in immunohistochemistry and western blot to study the role of EGFR mutation type III in enhancing the malignant phenotype in a small cell lung cancer cell line
	International journal of cancer (2002; 97: 7) **"Epidermal growth factor receptor mutation type III transfected into a small cell lung cancer cell line is predominantly localized at the cell surface and enhances the malignant phenotype."** Author(s):Damstrup L,Wandahl Pedersen M,Bastholm L,Elling F,Skovgaard Poulsen H PubMed Article URL:http://dx.doi.org/10.1002/ijc.1572
Mouse / 1:2000	MA5-13070 was used in western blot to develop tyrosine kinase affinity probes using chemical genetics
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Human / Not Cited	MA5-13070 was used in western blot to study the role of estrogen receptors in membrane lipid rafts in breast cancer signal transduction
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1 Miscellaneous PubMed References

Species / Dilution	Summary
Human / Not Cited	MA5-13070 was used in RT-qPCR to identify epigenetic silenced genes and clarify its roles and underlying mechanism in CRC.
	Cell communication and signaling : CCS (2022; 20:) **"Epigenetic silencing and tumor suppressor gene of HAND2 by targeting ERK signaling in colorectal cancer."** Author(s):Yuan Z,Yu X,Chen W,Chen D,Cai J,Jiang Y,Liu X,Wu Z,Wang L,Grady WM,Wang H PubMed Article URL:http://dx.doi.org/10.1186/s12964-022-00878-4

1 Immunohistochemistry (Paraffin) References

Species / Dilution	Summary
Human / 1:200	MA5-13070 was used in Immunohistochemistry (Paraffin) to to evaluate the prognostic and predictive values of the EGFR and IGF-1R in tumor samples from patients with BC and their correlation with socio-epidemiological features.
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5 Immunocytochemistry References

Species / Dilution	Summary

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Mouse / Not Cited	MA5-13070 was used in immunocytochemistry to study EGF-independent activation of mutant cell-surface EGF receptors in gefitinib-sensitive lung cancer Oncogene (2007; 26: 1567) **"EGF-independent activation of cell-surface EGF receptors harboring mutations found in gefitinib-sensitive lung cancer."** Author(s):Choi SH,Mendrola JM,Lemmon MA PubMed Article URL:http://dx.doi.org/10.1038/sj.onc.1209957
Human / 1:200	MA5-13070 was used in immunocytochemistry to use a high-throughput 3D hyaluronic acid hydrogel coculture of cancer cells with stromal cells to evaluate chemotherapeutics Advanced healthcare materials (2015; 4: 1664) **"Multilayered, Hyaluronic Acid-Based Hydrogel Formulations Suitable for Automated 3D High Throughput Drug Screening of Cancer-Stromal Cell Cocultures."** Author(s):Engel BJ,Constantinou PE,Sablatura LK,Doty NJ,Carson DD,Farach-Carson MC,Harrington DA,Zarembinski TI PubMed Article URL:http://dx.doi.org/10.1002/adhm.201500258
Human / Not Cited	MA5-13070 was used in immunocytochemistry to study the efficacy and anti-prolifferative mechanism of Proellex in breast cancer cells overexpressing aromatase and resistant to Letrozole The Journal of steroid biochemistry and molecular biology (2013; 133: 30) **"Efficacy and mechanism of action of Proellex, an antiprogestin in aromatase overexpressing and Letrozole resistant T47D breast cancer cells."** Author(s):Gupta A,Mehta R,Alimirah F,Peng X,Murillo G,Wiehle R,Mehta RG PubMed Article URL:http://dx.doi.org/10.1016/j.jsbmb.2012.08.004
Human / 2.5 µg/mL	MA5-13070 was used in immunocytochemistry to develop a process involving leukapheresis, elutriation and FACS to isolate circulating tumor cells from large volumes Cytometry. Part B, Clinical cytometry (2011; 80: 100) **"Enrichment of circulating tumor cells from a large blood volume using leukapheresis and elutriation: proof of concept."** Author(s):Eifler RL,Lind J,Falkenhagen D,Weber V,Fischer MB,Zeillinger R PubMed Article URL:http://dx.doi.org/10.1002/cyto.b.20560
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1 In vitro Assay References

Species / Dilution	Summary
Human / Not Cited	MA5-13070 was used in In vitro experiments to demonstrate that the intracellular destination of nanoparticles beyond its ability to internalize is an important parameter that has to be accounted for in the design of targeted drug delivery systems. Langmuir : the ACS journal of surfaces and colloids (2018; 34: 15343) **"Distinction Between Active and Passive Targeting of Nanoparticles Dictate Their Overall Therapeutic Efficacy."** Author(s):Clemons TD,Singh R,Sorolla A,Chaudhari N,Hubbard A,Iyer KS PubMed Article URL:http://dx.doi.org/10.1021/acs.langmuir.8b02946

2 Neutralization References

Species / Dilution	Summary
Human / 1 mg/ml	MA5-13070 was used in blocking or activating experiment to investigate the liquid crystal-based bioanalytical assays ACS applied materials & interfaces (2010; 2: 722) **"Design of surfaces for liquid crystal-based bioanalytical assays."** Author(s):Lowe AM,Ozer BH,Bai Y,Bertics PJ,Abbott NL PubMed Article URL:http://dx.doi.org/10.1021/am900753v
Human / Not Cited	MA5-13070 was used in blocking or activating experiment to study the therapeutic effects against cetuximab-resistant BRAF and KRAS mutant tumors of an antibody fusion protein that recognizes three EGFR epitopes Journal of molecular biology (2012; 422: 532) **"Triepitopic antibody fusions inhibit cetuximab-resistant BRAF and KRAS mutant tumors via EGFR signal repression."** Author(s):Spangler JB,Manzari MT,Rosalia EK,Chen TF,Wittrup KD PubMed Article URL:http://dx.doi.org/10.1016/j.jmb.2012.06.014

3 Immunoprecipitation References

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Species / Dilution	Summary
Human / Not Cited	MA5-13070 was used in immunoprecipitation to investigate the state of HER1-HER2 interaction and modification in cell lines and tumors Breast cancer research : BCR (2011; 13:) **"Quantitative assays for the measurement of HER1-HER2 heterodimerization and phosphorylation in cell lines and breast tumors: applications for diagnostics and targeted drug mechanism of action."** Author(s):DeFazio-Eli L,Strommen K,Dao-Pick T,Parry G,Goodman L,Winslow J PubMed Article URL:http://dx.doi.org/10.1186/bcr2866
Human / Not Cited	MA5-13070 was used in immunoprecipitation to develop a novel system for capture and isolation of biomedically important proteins Lab on a chip (2008; 8: 1357) **"Engineering of PDMS surfaces for use in microsystems for capture and isolation of complex and biomedically important proteins: epidermal growth factor receptor as a model system."** Author(s):Lowe AM,Ozer BH,Wiepz GJ,Bertics PJ,Abbott NL PubMed Article URL:http://dx.doi.org/10.1039/b801935e
Mouse / Not Cited	MA5-13070 was used in immunoprecipitation to study the role and therapuetic potential of the EGFR type III in modulating cellular responses to ionizing radiation Clinical cancer research : an official journal of the American Association for Cancer Research (2004; 10: 6732) **"Inhibition of the type III epidermal growth factor receptor variant mutant receptor by dominant-negative EGFR-CD533 enhances malignant glioma cell radiosensitivity."** Author(s):Lammering G,Hewit TH,Holmes M,Valerie K,Hawkins W,Lin PS,Mikkelsen RB,Schmidt-Ullrich RK PubMed Article URL:http://dx.doi.org/10.1158/1078-0432.CCR-04-0393

2 ELISA References

Species / Dilution	Summary
Human / Not Cited	MA5-13070 was used in ELISA to study the in vivo antitumor activity of a potent and selective IGF-1 receptor kinase inhibitor Cancer cell (2004; 5: 231) **"In vivo antitumor activity of NVP-AEW541-A novel, potent, and selective inhibitor of the IGF-IR kinase."** Author(s):García-Echeverría C,Pearson MA,Marti A,Meyer T,Mestan J,Zimmermann J,Gao J,Brueggen J,Capraro HG,Cozens R,Evans DB,Fabbro D,Furet P,Porta DG,Liebetanz J,Martiny-Baron G,Ruetz S,Hofmann F PubMed Article URL:http://dx.doi.org/10.1016/s1535-6108(04)00051-0
Not Applicable / Not Cited	MA5-13070 was used in ELISA to suggest that AEE788 is an anticancer agent that deregulates tumor cell proliferation and angiogenic parameters Cancer research (2004; 64: 4931) **"AEE788: a dual family epidermal growth factor receptor/ErbB2 and vascular endothelial growth factor receptor tyrosine kinase inhibitor with antitumor and antiangiogenic activity."** Author(s):Traxler P,Allegrini PR,Brandt R,Brueggen J,Cozens R,Fabbro D,Grosios K,Lane HA,McSheehy P,Mestan J,Meyer T,Tang C,Wartmann M,Wood J,Caravatti G PubMed Article URL:http://dx.doi.org/10.1158/0008-5472.CAN-03-3681

3 Flow Cytometry References

Species / Dilution	Summary
Human / Not Cited	MA5-13070 was used in flow cytometry to study the role of HER-2/neu overexpression in increasing the viable hypoxic cell population within solid tumors Molecular cancer research : MCR (2004; 2: 606) **"HER-2/neu overexpression increases the viable hypoxic cell population within solid tumors without causing changes in tumor vascularization."** Author(s):Dragowska WH,Warburton C,Yapp DT,Minchinton AI,Hu Y,Waterhouse DN,Gelmon K,Skov K,Woo J,Masin D,Huxham LA,Kyle AH,Bally MB PubMed Article URL:http://www.ncbi.nlm.nih.gov/pubmed/15561777
Human / Not Cited	MA5-13070 was used in flow cytometry to study the effect of epidermal growth factor and HaCaT-ras on MMP-9 expression and cell migration Experimental dermatology (1998; 7: 184) **"Cell migration and MMP-9 secretion are increased by epidermal growth factor in HaCaT-ras transfected cells."** Author(s):Charvat S,Chignol MC,Souchier C,Le Griel C,Schmitt D,Serres M PubMed Article URL:http://dx.doi.org/10.1111/j.1600-0625.1998.tb00322.x

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	MA5-13070 was used in flow cytometry to study the use of yeast surface display for identifying stable folded protein domains and characterizing antibody binding epitopes
Human / Not Cited	Journal of immunological methods (2004; 287: 147) **"Domain-level antibody epitope mapping through yeast surface display of epidermal growth factor receptor fragments."** Author(s):Cochran JR,Kim YS,Olsen MJ,Bhandari R,Wittrup KD PubMed Article URL:http://dx.doi.org/10.1016/j.jim.2004.01.024

1 Gel Shift References

Species / Dilution	Summary
	MA5-13070 was used in EMSA to investigate the nucleophilic reactivity of natural antibodies
Human / 0.5 uM	The Journal of biological chemistry (2003; 278: 20436) **"Broadly distributed chemical reactivity of natural antibodies expressed in coordination with specific antigen binding activity."** Author(s):Planque S,Taguchi H,Burr G,Bhatia G,Karle S,Zhou YX,Nishiyama Y,Paul S PubMed Article URL:http://dx.doi.org/10.1074/jbc.M301468200

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