ARG10994
anti-EGFRvIII antibody [DH8.3]

Package: 100 µg
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [DH8.3] recognizes EGFRvIII
Tested Reactivity	Hu
Tested Application	ELISA, FACS, IHC-Fr, IHC-P, IP, WB
Specificity	Anti-EGFRvIII antibody [DH8.3] is specific for ΔEGFR (EGFR type III), a truncated form of the epidermal growth factor receptor that is commonly associated with cancer cells, especially glioblastoma cells. ΔEGFR lacks exons 2–7 of the external domain. Anti-EGFRvIII antibody [DH8.3] does not recognise the natural, wild-type form of EGFR receptor, so therefore it does not cross react with the full-length EGFR receptor. It only binds cells expressing the mutant receptor. This antibody has successfully targeted tumours expressing ΔEGFR (EGFR type III) in nude mice. This antibody recognises ΔEGFR (EGFR type III) in both denatured and native states.
Host	Mouse
Clonality	Monoclonal
Clone	DH8.3
Isotype	IgG1
Target Name	EGFRvIII
Species	Human
Immunogen	KLH-conjugated synthetic peptide corresponding to the junctional region of the truncated receptor of EGFRvIII. (LEEKKGNYVVTDHC)
Conjugation	Un-conjugated
Alternate Names	PIG61; ERBB1; Proto-oncogene c-ErbB-1; Receptor tyrosine-protein kinase erbB-1; NISBD2; Epidermal growth factor receptor; ERBB; HER1; EC 2.7.10.1; mENA

Application Instructions

Application table

Application	Dilution
ELISA	Assay-dependent
FACS	Assay-dependent
IHC-Fr	Assay-dependent
IHC-P	Assay-dependent
IP	Assay-dependent
WB	Assay-dependent

Application Note: IHC-P: Antigen Retrieval: Heat mediation was performed in EDTA buffer (pH 8.0).
* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

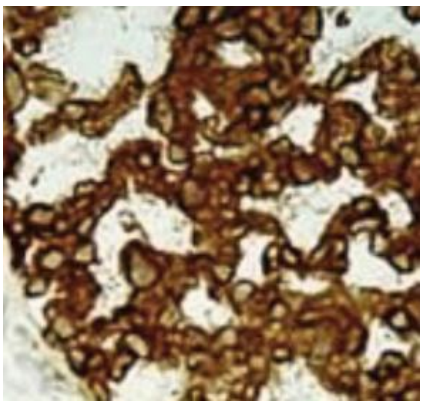
Properties

Form	Liquid
Purification	Purification with Protein A.
Buffer	PBS and 0.02% Sodium azide.
Preservative	0.02% Sodium azide
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

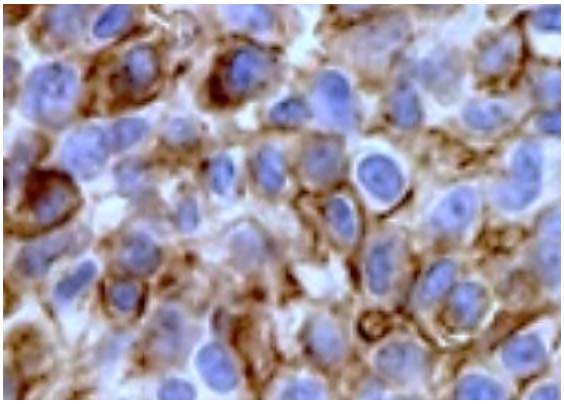
Gene Symbol	EGFR
Gene Full Name	epidermal growth factor receptor
Background	The protein encoded by this gene is a transmembrane glycoprotein that is a member of the protein kinase superfamily. This protein is a receptor for members of the epidermal growth factor family. EGFR is a cell surface protein that binds to epidermal growth factor. Binding of the protein to a ligand induces receptor dimerization and tyrosine autophosphorylation and leads to cell proliferation. Mutations in this gene are associated with lung cancer. Multiple alternatively spliced transcript variants that encode different protein isoforms have been found for this gene. [provided by RefSeq, Jul 2010]
Function	Receptor tyrosine kinase binding ligands of the EGF family and activating several signaling cascades to convert extracellular cues into appropriate cellular responses. Known ligands include EGF, TGFA/TGF-alpha, amphiregulin, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF. Ligand binding triggers receptor homo- and/or heterodimerization and autophosphorylation on key cytoplasmic residues. The phosphorylated receptor recruits adapter proteins like GRB2 which in turn activates complex downstream signaling cascades. Activates at least 4 major downstream signaling cascades including the RAS-RAF-MEK-ERK, PI3 kinase-AKT, PLCgamma-PKC and STATs modules. May also activate the NF-kappa-B signaling cascade. Also directly phosphorylates other proteins like RGS16, activating its GTPase activity and probably coupling the EGF receptor signaling to the G protein-coupled receptor signaling. Also phosphorylates MUC1 and increases its interaction with SRC and CTNNB1/beta-catenin. Isoform 2 may act as an antagonist of EGF action. [UniProt]
Calculated Mw	134 kDa
PTM	Phosphorylation at Ser-695 is partial and occurs only if Thr-693 is phosphorylated. Phosphorylation at Thr-678 and Thr-693 by PRKD1 inhibits EGF-induced MAPK8/JNK1 activation. Dephosphorylation by PTPRJ prevents endocytosis and stabilizes the receptor at the plasma membrane. Autophosphorylation at Tyr-1197 is stimulated by methylation at Arg-1199 and enhances interaction with PTPN6. Autophosphorylation at Tyr-1092 and/or Tyr-1110 recruits STAT3. Dephosphorylated by PTPN1 and PTPN2. Monoubiquitinated and polyubiquitinated upon EGF stimulation; which does not affect tyrosine kinase activity or signaling capacity but may play a role in lysosomal targeting. Polyubiquitin linkage is mainly through 'Lys-63', but linkage through 'Lys-48', 'Lys-11' and 'Lys-29' also occurs. Deubiquitination by OTUD7B prevents degradation. Ubiquitinated by RNF115 and RNF126 (By similarity). Methylated. Methylation at Arg-1199 by PRMT5 stimulates phosphorylation at Tyr-1197. [UniProt]

Images



ARG10994 anti-EGFRvIII antibody [DH8.3] IHC-Fr image

Immunohistochemistry: Frozen section of Human glioblastoma tissue with wtEGFR/ΔEGFR genotyping stained with ARG10994 anti-EGFRvIII antibody [DH8.3].



ARG10994 anti-EGFRvIII antibody [DH8.3] IHC-P image

Immunohistochemistry: Formalin-fixed and paraffin-embedded Human ovarian tumor tissue. Antigen Retrieval: Heat mediation was performed in EDTA buffer (pH 8.0). The tissue section was stained with ARG10994 anti-EGFRvIII antibody [DH8.3].