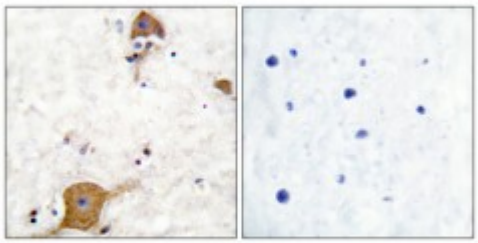
Anti-Neuregulin-1 SMDF antibody



Description	Neuregulin-1 SMDF is a protein encoded by the NRG1 gene which is approximately 70,3 kDa. Neuregulin-1 SMDF is secreted and some isoforms are localised to the nucleus. It is involved in RET signalling, apoptotic pathways in synovial fibroblasts, GAB1 signalosome and the GPCR pathway. It mediates cell-cell signalling and plays a critical role in the growth and development of multiple organ systems. It is also a direct ligand for ERBB3 and ERBB4 tyrosine kinase receptors. Neuregulin-1 SMDF isoform type 1 is the predominant form expressed in the endocardium. Mutations in the NRG1 gene may result in schizophrenia and bipolar disorder. STJ94419 was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen. This polyclonal antibody detects endogenous levels of Neuregulin-1 SMDF protein.
Model	STJ94419
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	ELISA, IF, IHC, WB
Immunogen	Synthesized peptide derived from human Neuregulin-1 SMDF
Immunogen Region	1-80 aa, N-terminal
Gene Symbol	NRG1
Dilution range	WB 1:500-1:2000IHC 1:100-1:300IF 1:200-1:1000ELISA 1:10000
Specificity	Neuregulin-1 SMDF Polyclonal Antibody detects endogenous levels of Neuregulin-1 SMDF protein.

Tissue Specificity	Type I isoforms are the predominant forms expressed in the endocardium. Isoform alpha is expressed in breast, ovary, testis, prostate, heart, skeletal muscle, lung, placenta liver, kidney, salivary gland, small intestine and brain, but not in uterus, stomach, pancreas, and spleen. Isoform 3 is the predominant form in mesenchymal cells and in non-neuronal organs, whereas isoform 6 is the major neuronal form. Isoform 8 is expressed in spinal cord and brain. Isoform 9 is the major form in skeletal muscle cell
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Pro-neuregulin-1, membrane-bound isoform Pro-NRG1 Neuregulin-1 Acetylcholine receptor-inducing activity ARIA Breast cancer cell differentiation factor p45 Glial growth factor Heregulin HRG Neu differen
Molecular Weight	44 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Alternative Names	Pro-neuregulin-1, membrane-bound isoform Pro-NRG1 Neuregulin-1 Acetylcholine receptor-inducing activity ARIA Breast cancer cell differentiation factor p45 Glial growth factor Heregulin HRG Neu differen
Function	Direct ligand for ERBB3 and ERBB4 tyrosine kinase receptors. Concomitantly recruits ERBB1 and ERBB2 coreceptors, resulting in ligand-stimulated tyrosine phosphorylation and activation of the ERBB receptors. The multiple isoforms perform diverse functions such as inducing growth and differentiation of epithelial, glial, neuronal, and skeletal muscle cells; inducing expression of acetylcholine receptor in synaptic vesicles during the formation of the neuromuscular junction; stimulating lobuloalveolar budding and milk production in the mammary gland and inducing differentiation of mammary tumor cells; stimulating Schwann cell proliferation; implication in the development of the myocardium such as trabeculation of the developing heart. Isoform 10 may play a role in motor and sensory neuron development. Binds to ERBB4 . Binds to ERBB3 . Acts as a ligand for integrins and binds (via EGF domain) to integrins ITGAV:ITGB3 or ITGA6:ITGB4. Its binding to integrins and subsequent ternary complex formation with integrins and ERRB3 are essential for NRG1-ERBB signaling. Induces the phosphorylation and activation of MAPK3/ERK1, MAPK1/ERK2 and AKT1 . Ligand-dependent ERBB4 endocytosis is essential for the NRG1-mediated activation of these kinases in neurons .
Sequence and Domain Family	The cytoplasmic domain may be involved in the regulation of trafficking and proteolytic processing. Regulation of the proteolytic processing involves initial intracellular domain dimerization . ERBB receptor binding is elicited entirely by the EGF-like domain.

Cellular Localization	Pro-neuregulin-1, membrane-bound isoform: Cell membrane. Single-pass type I membrane protein. Does not seem to be active.. Neuregulin-1: Secreted.. Isoform 8: Nucleus. May be nuclear.. Isoform 9: Secreted. Has a signal peptide.. Isoform 10: Membrane. Single-pass type I membrane protein. May possess an internal uncleaved signal sequence.
Post-translational Modifications	Proteolytic cleavage close to the plasma membrane on the external face leads to the release of the soluble growth factor form.; N- and O-glycosylated. Extensive glycosylation precedes the proteolytic cleavage .