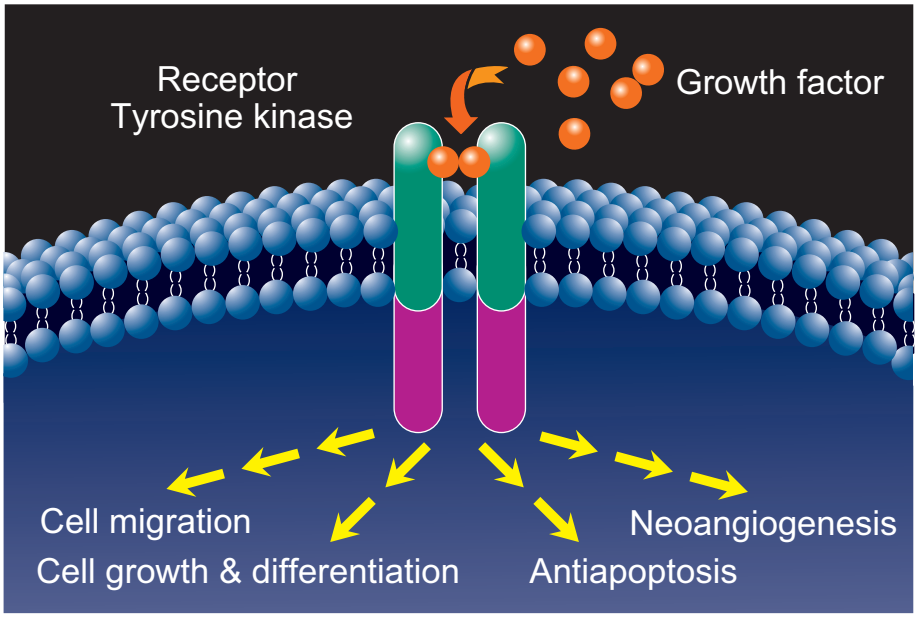
For-Non Clinical Research Use Only

Anti-receptor

Tyrosine kinase Antibodies

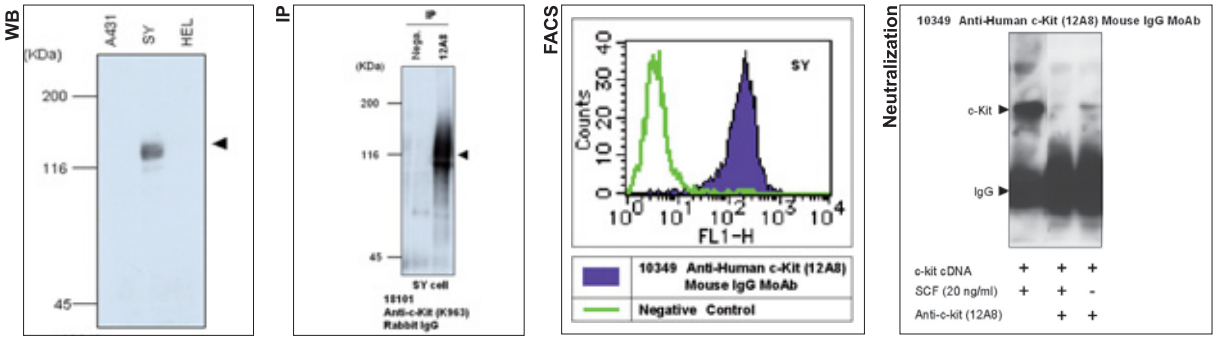


Tyrosine kinase is categolized into two types: receptor tyrosine kinase which is a receptor of growth factor, and non-receptor tyrosine kinase. Receptor tyrosine kinase is activated by binding to a growth factor which is its ligand, and then its tyrosine residue is phosphorylated. By binding a SH2 domain-containing protein to this phosphorylated tyrosine residue, the information of the growth factor will be transmitted into the interior of the cell. This intracellular signaling cascade is considered to be directly involved in growth and malignant alteration of cells.
These monoclonal antibodies are applicable to western blotting, immune precipitation and flow cytometry analysis. It has been confirmed that some of them have neutralizing activity against the autophosphorylation resulting from ligand binding.
※For the use in neutralization tests, custom orders (without BSA and NaN_3, desired volume) are available.

c-Kit (12A8)

Code No.	Name				Volume	WB	IP	FACS	Neutralization
10349	Anti-Human	c-Kit	(12A8)	Mouse IgG MoAb	100 ug	○ 1-5 ug/mL	○ 3-5 ug/mL	○	○

The proto-oncogene *c-kit* encodes a transmembrane tyrosine kinase receptor, c-Kit, and the ligand for c-Kit has been identified as the stem cell factor (SCF). Recent experimental studies have shown that c-Kit plays a key role in the development of a component of the pacemaker system that is required for generation of autonomic gut motility. These studies further suggest that interaction of the c-Kit and SCF is essential for development of enteric nervous system. Recently, it is reported that the c-Kit may be an important marker for gastrointestinal stromal tumors (GISTs) which may originate from the interstitial cells of Cajal (ICCs).



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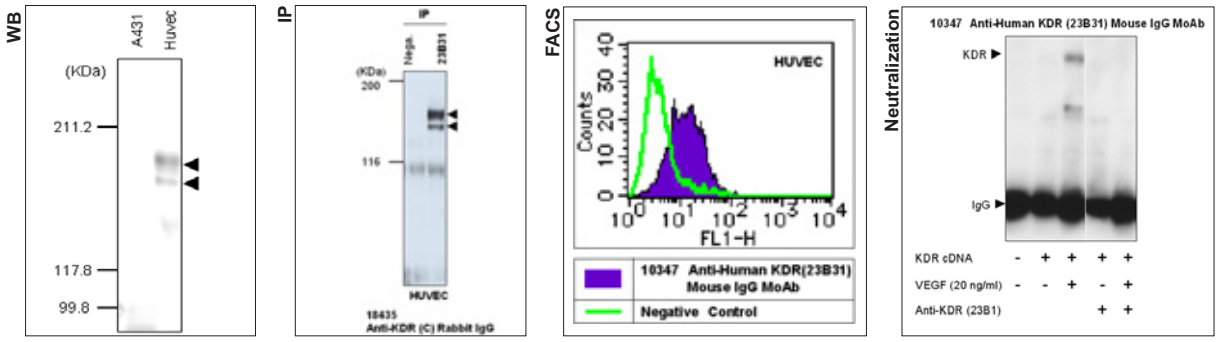
KDR (23B31)

Code No.	Name				Volume	WB	IP	FACS	Neutralization
10347	Anti-Human	KDR	(23B31)	Mouse IgG MoAb	100 ug	○ 1-5 ug/mL	○ 3-5 ug/mL	○	○

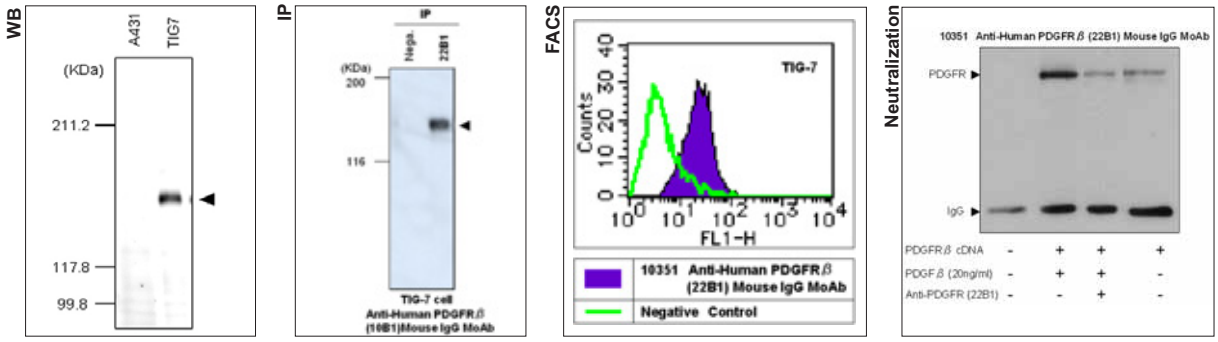
KDR, alternative name Flk-1 (type 2 receptor), is one of the receptors for VEGFs, important growth factors for vasculogenesis, angiogenesis and lymphangiogenesis. Flt-1 (type 1 receptor) is also known as a VEGF receptor. In particular, it is believed that they play important roles in the signal transduction of endothelial and lymphatic endothelial cells. It is understood that after binding with VEGF, Flt-1 and KDR/Flk-1 stimulate the vascular endothelial cells in a coordinated action.



PDGFR β (22B1)

Code No.	Name				Volume	WB	IP	FACS	Neutralization
10351	Anti-Human	PDGFR β	(22B1)	Mouse IgG MoAb	100 ug	○ 1-5 ug/mL	○ 3-5 ug/mL	○	○

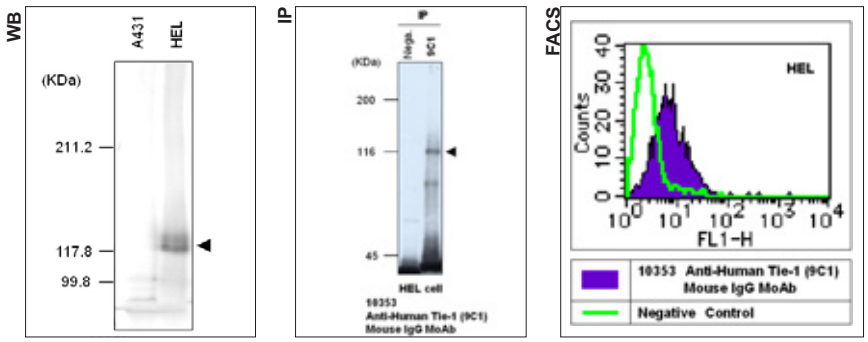
PDGF, a ligand of PDGFR, has 4 isofoms, A-, B-, C- and D-chains, and forms hetero and/or homo dimers, PDGF-AA, -AB, -BB, -CC, -DD. On the other hand, PDGFR has 2 isoforms, α- and β-chains and forms hetero and/or homo dimers, PDGFR- α α , - α β and – β β . PDGF-A and PDGF-C binds specifically to PDGFR- α , PDGF-B binds to PDGFR- α and PDGFR- β , and PDGF-D binds specifically to PDGFR- β . In other words, PDGF-AA and PDGF-CC can activate only PDGF- α α , while PDGF-AB can activate PDGFR- α α and PDGFR- α β , and PDGF-BB can activate PDGFR- α α , - α β and – β β . While, PDGF-DD has been reported to be able to activate PDGFR- α β as well as PDGFR- β β . When the receptor is dimerized, tyrosine kinase activity in the intracellular region increases and auto-phosphorylation of the tyrosine residue takes place.



Tie-1 (9C1)

Code No.	Name				Volume	WB	IP	FACS	Neutralization
10353	Anti-Human	Tie-1	(9C1)	Mouse IgG MoAb	100 ug	○ 1-5 ug/mL	○ 3-5 ug/mL	○	Not Tested

TIE is a new receptor tyrosine kinase that was cloned from K562, a chronic myelocytic leukemia cell line. Its molecular weight is 117 kDa and its structure begins with an immunoglobulin-like domain from the extracellular N terminal, continues to 3 EGF-like domains, another immunoglobulin-like domain, 3 fibronectin III-like domains, a membrane-penetrating domain, 2 tyrosine kinase domains and a C-terminal domain. It has been reported that Tek molecules with a high homology (about 80%) have been cloned from the kinase domains. These molecules are believed to make up a Tie family. Tie-2 and a receptor tyrosine kinase Tie-1 that is expressed specifically in endothelial cells are included in this Tie family. Among the Tie-1 gene knockout mice, a vasculature is formed in a homozygote (-/-) but the mouse is likely to succumb to pulmonary edema. Thus it has been reported that the signal via Tie-1 is important in maintaining the vascular structure.



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