CELL APPLICATIONS, INC.

FGF-8 Antibody

Cat. No. CA1216

Applications:	**WB, IHC**
Detected MW:	**28 kDa**
Species & Reactivity:	**Human, Rat**
Isotype:	**Rabbit IgG**

BACKGROUND

Fibroblast Growth Factors (FGFs) and their receptors constitute an elaborate signaling system that participates in many developmental and repair processes of virtually all mammalian tissues. Among the 23 FGF members, ten have been identified in the brain. Four FGF receptor tyrosine kinases (FGFR1-4) are known so far.[1] Ligand binding of these receptors greatly depends on the presence of heparan sulfate proteoglycans, which act as low affinity FGFRs. Ligand binding specificity of FGFRs depends on the third extracellular Ig-like domain, which is subject to alternative splicing. The FGF elicits the regulatory activity by binding to FGF receptor (FGFR)-heparin sulfate complexes and inducing receptor autophosphorylation, as well as phosphorylation of downstream signaling molecules. This include phosphorylation of Src and PLC-gamma, leading finally to activation of PKC, Crk and Shc. SNT/FRS2 serves as an alternative link between FGFRs to the activation of PKC, and additionally activates the Ras signaling cascade.[2] Deregulation of FGFR signaling, by activating mutations or ligand/receptor overexpression, could allow these receptors to become constitutively active, leading to cancer development. These cancers include hematopoietic and solid tumors (breast, bladder, and prostate carcinomas).

FGF8 (or androgen-induced growth factor, the eighth member of the fibroblast growth factor family) is widely expressed during embryonic development. It has been shown to mediate embryonic epithelial-mesenchymal transition and to have a crucial role in gastrulation and early organization and differentiation of midbrain/hindbrain, pharyngeal, cardiac, urogenital and limb structures.[3] During adulthood FGF8 expression is much more restricted but in hormonal cancers it becomes frequently activated. High level of FGF8 expression in tumors is associated with a poor prognosis at least in prostate cancer. In experimental models FGF8 induces and facilitates prostate tumorigenesis and increases growth and angiogenesis of tumors. Several lines of evidence for autocrine and paracrine loops in the growth regulation of breast, prostate and ovarian cancer by FGF8 have been suggested.[4] In addition FGF8 can fine-tune its regulatory actions by autoregulation of FGFR expression.[5]

References:

1. Zhang Y et al.: Molecular Endocrinology 22:167-175, 2008.
2. Acevedo VD et al.: Cell Cycle 8:580-588, 2008.
3. Mattila, M.M. & Härkönen, P.L.: Cytokine Growth Factor Rev. 18:257-66, 2007
4. Dorkin, T.J. et al: Oncogene 17:2755-61, 1999
5. Mott, N.N. et al: PLoS ONE 5:e10143, 2010

TECHNICAL INFORMATION

Source:
FGF-8 Antibody is a rabbit antibody raised against a short peptide from human FGF-8 sequence.

Specificity and Sensitivity:
This antibody detects endogenous levels of FGF-8 proteins without cross-reactivity with other related proteins.

Storage Buffer: PBS and 30% glycerol

Storage:
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	n/d
IHC	1:50-200
ICC	n/d
FACS	n/d

**Optimal dilutions must be determined by end user.*

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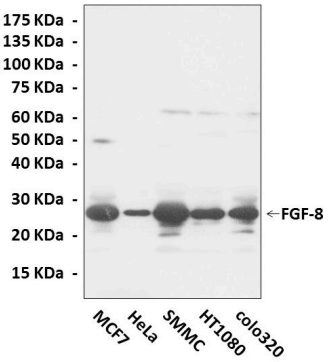
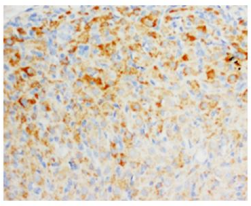
QUALITY CONTROL DATA





Top: Western Blot detection of FGF-8 proteins in various cell lysates using FGF-8 Antibody. **Bottom:** This antibody stains paraffin-embedded rat ovary tissue in immunohistochemical analysis.