Technical Data Sheet

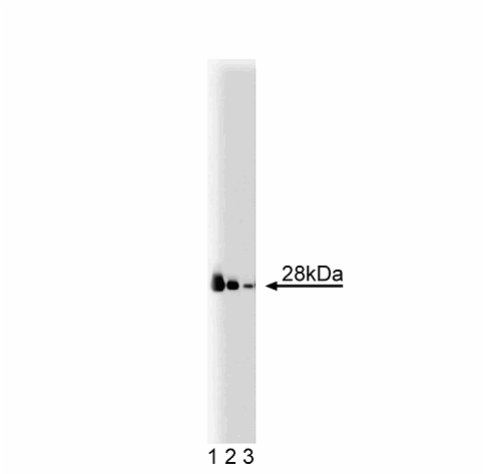
Purified Mouse Anti-KNP-1

Product Information

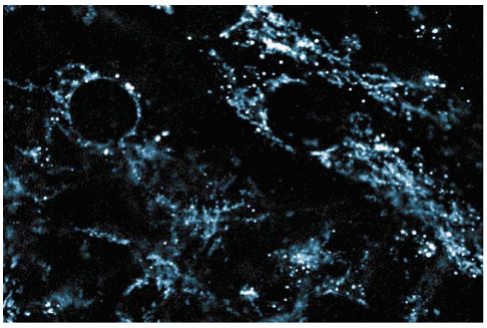
Material Number:	**611596**
Alternate Name:	HES1
Size:	50 µg
Concentration:	250 µg/ml
Clone:	35/KNP-1/HES1
Immunogen:	Human ES1 aa. 49-240
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human Tested in Development: Chicken, Dog, Mouse, Rat
Target MW:	28 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Human chromosome 21 has been extensively studied because trisomy 21 causes Down syndrome. In addition to this syndrome, chromosome 21 is the loci for five other hereditary disorders, myoclonus epilepsy, autoimmune polyglandular disease type I, nonsyndromic hereditary deafness, Knobloch syndrome, and bipolar affective disorder. Exon trapping studies of human chromosome 21q22.3 identified transcriptional units with homology to the zebrafish ES1 and the E. coli sigma cross-reacting protein 27A (SCRP27A). The human ES1 homolog (HES1) was also identified as KNP-1α/KNP-1β, as well as GT335 in similar screens for genes involved in disorders that map to chromosome 21q22.3. KNP-1/HES1 mRNA is ubiquitously expressed with the highest expression in muscle and heart. KNP-1/HES1 protein contains putative mitochondrial targeting signals and localizes to mitochondria in mouse NIH 3T3 cells. Interestingly, mitochondrial deletions have been implicated in syndromes related to deafness. Thus, KNP-1/HES1 may be a mitochondrial protein important for normal development, and may be a candidate gene for disorders related to deletions at chromosome 21q22.3.



Western blot analysis of KNP-1 on HeLa cell lysate.
Lane 1: 1:2500, lane 2: 1:5000, lane 3: 1:10000 dilution of anti-KNP-1 antibody.



Immunofluorescent staining of NIH-3T3 cells.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20°C.

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml.

Suggested Companion Products

Catalog Number	Name	Size	Clone
611449	HeLa Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Nagamine K, Kudoh J, Minoshima S, et al. Isolation of cDNA for a novel human protein KNP-I that is homologous to the E. coli SCRP-27A protein from the autoimmune polyglandular disease type I (APECED) region of chromosome 21q22.3. *Biochem Biophys Res Commun.* 1997; 225(2):608-616.(Biology)
Scott HS, Chen H, Rossier C, Lalioti MD, Antonarakis SE. Isolation of a human gene (HES1) with homology to an Escherichia coli and a zebrafish protein that maps to chromosome 21q22.3. *Hum Genet.* 1997; 99(5):616-623.(Biology)